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A STUDY OF THE VOCATIONAL AND EDUCATIONAL INTERESTS OF JUNIOR HIGH SCHOOL GIRLS AND BOYS.
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THE FREQUENCY AND INFLUENCES OF VOCATIONAL TYPE PREFERENCES AMONG APPROXIMATELY 350 SEVENTH AND EIGHTH GRADERS WERE DETERMINED DURING THIS STUDY. PROJECT ACTIVITIES WERE CONDUCTED AS SUPPLEMENTARY TO COOPERATIVE RESEARCH PROJECT NO. 367, "A STUDY OF INTERESTS OF CHILDREN AND YOUTH," AND WERE REPORTED IN A DOCTORAL DISSERTATION. DATA WERE ALSO COLLECTED ON PAST WORK EXPERIENCE, FUTURE EDUCATIONAL PLANS, AND STUDENT ATTITUDES TOWARD COURSES IN WHICH THEY WERE THEN ENROLLED. ACADEMIC ACHIEVEMENT AND MENTAL ABILITY TESTS WERE ADMINISTERED TO ALL STUDENT PARTICIPANTS. BASED ON THE COMBINED RESULTS OF THE TESTS AND ON THE FINDINGS DERIVED FROM THE VARIOUS VOCATIONAL FACTORS PERCEIVED BY THE STUDENTS, ACADEMIC ABILITIES APPEARED TO HAVE A GREATER AMOUNT OF INFLUENCE UPON VOCATIONAL PREFERENCE THAN HAD MENTAL ABILITY. THE RESULTS ALSO SUGGESTED THAT THESE ABILITIES WERE MORE CLOSELY TIED TO THE VOCATIONAL AND EDUCATIONAL INTERESTS OF BOYS THAN OF GIRLS. IMPLICATIONS AND RECOMMENDATIONS WERE PROVIDED FOR PARENTS, TEACHERS AND COUNSELORS CONCERNING THE WIDE RANGE OF INDIVIDUAL DIFFERENCES DEMONSTRATED BY THE STUDY DATA. (JH)

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ABSTRACT

A STUDY OF THE VOCATIONAL AND EDUCATIONAL INTERESTS OF JUNIOR HIGH SCHOOL GIRLS AND BOYS

Stanley Krippner
Northwestern University
1961

__The problem__. This investigation attempted to answer five questions in regard to the sample studied.

1.) What are the most frequently mentioned vocational preferences?
2.) What factors do the students perceive as influencing their preferences?
3.) In what work experiences have the students already participated?
4.) What are the students' future educational plans?
5.) What are the students' attitudes toward the courses in which they are currently enrolled?

__Procedure__. Data accumulated in this study were obtained from 351 seventh and eighth grade girls and boys enrolled in a large Skokie, Illinois, elementary school. Skokie might be described as an upper-middle class suburb of Chicago. The sample not only lives in a higher-than-average socio-economic environment but received higher-than-average scores on the Iowa Every-Pupil Tests of Basic

Skills and the S.R.A. Primary Mental Abilities Tests. The 351 students (162 girls and 189 boys) also completed a vocational-educational questionnaire consisting of 53 yes-no and open-ended questions.

High and low groups for the IEP and PMA were derived by finding the mean score for each sex and using those students falling one standard deviation above and below the mean. For example, the girls' mean IQ on the PMA was 115.7; the standard deviation was 14.4. The high PMA girls' group, therefore consisted of 28 girls with IQs of 130 to 150. There were 21 girls in the low PMA group with an IQ range of 80 to 101.

The mean boys' PMA IQ was 113.1 with a standard deviation of 14.2. There were 28 boys in the high PMA group (with a range of 127 to 150) and 36 boys in the low PMA group (with IQs ranging from 79 to 99).

IEP scores were equalized by adding half a year to the seventh graders' scores and subtracting half a year from the eighth graders' scores. The girls' mean was 8.7 with a standard deviation of 1.0. There were 30 girls in the high IEP group (with scores ranging from 9.7 to 11.0) and 26 girls in the low IEP group (with a range of 6.5 to 7.7).

The mean boys' IEP score was also 8.7 with a standard deviation of 1.0. There were 26 boys in the high IEP group (with a range of 9.7 to 11.0) and 43 boys in the low IEP group (with a range of 5.9 to 7.7).

There was about a 60 per cent overlap between the IEP and PMA groups.

Differences between girls and boys and between high and low IEP and PMA groups were investigated with the chi square test (corrected for continuity) and the _t_ test. Relationships between the parents' occupational levels and the occupational levels of the students' preferred vocations were examined with the Pearson product-moment coefficient of correlation. All vocations were categorized according to the Roe occupational classification system.

Findings. Data from this study provided the following answers to the previously stated questions.

WHAT ARE THE MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES? The most commonly mentioned occupations by girls in the sample were "teacher," "secretary," "nurse," "airplane stewardess," and "model," in that order. Boys' most frequently cited vocational preferences were "engineer," "scientist," "doctor," "professional athlete," and "lawyer."

Girls replied that they had made their vocational decision at the mean age of 11.4, boys at 12.5. This difference is significant at the .01 level of confidence.

About as many girls in both high and low IEP groups mentioned medical careers, primarily in nursing. Significantly (.05) more girls in the high IEP group listed teaching careers than in the low group.

About as many boys in both high and low IEP groups cited medical and engineering careers, but significantly (.01) more boys in the high group mentioned vocations in science.

Occupations requiring a college education were selected by significantly (.01) more boys in the high IEP group than in the low group. For girls, there was no significant difference between the high and low groups in this regard.

A comparison of high and low PMA groups produced similar results with two exceptions. There was no significant difference between girls' groups regarding careers in teaching. Furthermore, all IEP differences which were significant at the .01 confidence level were significant in the PMA comparisons at the .05 level.

WHAT FACTORS DO THE STUDENTS PERCEIVE AS INFLUENCING THEIR PREFERENCES? When asked why they intended to follow their preferred line of work, about 25 per cent of both sexes replied, "Because I enjoy it" or "Because I like it." Next in frequency were girls' responses of "Because it's interesting" and "To help people" and boys' responses of "The pay is good" and "Because my father is one."

About 16 per cent of the fathers were reported to prefer that their sons follow in their occupational footsteps and 12 per cent of the boys intended to do so. These proportions, though small, are significantly (.01) larger than for the girls. Few of the latter showed an interest in either their father's or mother's vocation.

Almost twice as many boys as girls claimed that their fathers had suggested vocations for them (.01). In addition, fathers were seen to suggest vocations for their sons more often than did the mothers (.05).

High IEP girls and boys were more frequently given freedom of choice by their fathers than were low IEP students (.01). This difference was not found to be significant in regard to the mothers of the IEP groups or for either parent when the PMA groups were compared.

There are positive correlations (.01) between the occupational levels of the girls' and boys' preferred vocations and the occupational levels of their fathers' jobs. A similar relationship (.01) exists between the occupational levels of the careers that fathers prefer for their sons and the levels of the fathers' own jobs.

This relationship is not demonstrated in regard to the mothers' occupational preferences for their sons; most of the mothers, regardless of their socio-economic position, preferred vocations for their sons at very high occupational levels. The mean occupational level of the mothers' preferences for their sons is significantly (.01) higher than the fathers' preference level.

About ten per cent of the sample claimed to have been influenced by mass media in arriving at occupational decisions. The majority of the specific books, movies, and television programs cited were in the vocational fields of entertainment and professional sports.

IN WHAT WORK EXPERIENCES HAVE THE STUDENTS ALREADY PARTICIPATED? About 12 per cent of the girls and 21 per cent of the boys expressed doubts that they were fitted for the kind of work they want to do (.05). When the high and low IEP groups were compared, a significantly (.05) larger number of low IEP boys expressed doubts as to whether they were fitted. This tendency was not statistically significant for the girls in the sample or for the PMA groups of either sex.

Twice as many girls as boys stated that they had already helped somebody do the kind of work they preferred as a lifetime career (.01).

About ten per cent of each sex responded that they held part-time jobs at the present time. The girls' most frequently mentioned job was "babysitter" while more boys cited "newspaper boy" than any other part-time occupation.

WHAT ARE THE STUDENTS' FUTURE EDUCATIONAL PLANS? About the same number of girls and boys (92 per cent) responded that their parents want them to attend college. Of the girls, 85 per cent wanted to attend college and 55 per cent planned to work part-time. Of the boys, 91 per cent hoped to go to college while 71 per cent wanted part-time employment.

The number of boys desiring a college education is not significantly different from the number of girls.

Significantly (.01) more boys than girls expressed an interest in working while in college.

There is no significant difference between high and low IEP and PMA groups in regard to parental aspirations for a college education. In addition, about as many girls and boys in the high as in the low groups stated that they hope to attend college.

WHAT ARE THE STUDENTS' ATTITUDES TOWARD THE COURSES IN WHICH THEY ARE CURRENTLY ENROLLED? About 83 per cent of the girls and 60 per cent of the boys stated that they liked school (.01).

The girls' favorite subjects were English, science, mathematics, and social studies, in that order. Boys' favorites were science, mathematics, social studies, and physical education. Girls' least-liked subjects were mathematics, science, social studies, and English while boys disliked English, science, mathematics, and social studies. Sex differences regarding subject likes and dislikes are statistically significant (.01).

There is no significant difference between girls' high and low IEP and PMA groups in connection with their liking for school. However, significantly (.01) more of the high IEP boys liked school than the low IEP boys. This difference also exists for the boys' PMA groups (.05).

Both high IEP girls (.05) and boys (.01) preferred academic subjects to a greater degree than did the low IEP students who demonstrated a greater preference for non-academic subjects (physical education, shop, home economics, *etc.*). This difference also characterizes PMA boys (.05) but not PMA girls.

SUMMARY: More significant differences were found between high and low IEP groups than between high and low PMA groups. More significant differences were found between high and low boys than between high and low girls (on both the IEP and PMA). This suggests that the IEP taps abilities which are of greater influence upon vocational preference than those measured by the PMA. Academic achievement, therefore, is probably more clearly perceived by the students than is mental ability.

The results also suggest that these abilities are more closely tied to vocational and educational interests by boys than by girls. Leona Tyler's[1] discovery that activities are related to ability in the case of first grade boys but not first grade girls is, apparently, substantiated to some degree at the junior high school level.

Recommendations. This study's findings indicate that parents should strive toward a more realistic assessment of their sons' and daughters' abilities, attitudes, and interests. Many fathers and mothers seem to be inculcating youngsters of average and below-average ability with unrealistic educational and vocational goals.

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[1] Leona Tyler, "The Relationship of Interests to Ability and Reputation Among First-Grade Children," *Educational and Psychological Measurement*, 11:255-264, Summer, 1951.

Teachers could do more to stress the value of both high-level and low-level occupations. All too often, teachers' comments, textbooks, and the school curriculum leave students with the impression that professional and business careers are the only vocations approved by the school and its personnel.

An introduction of occupations courses into high school programs would help girls and boys gain a more thorough knowledge of their own abilities and how they relate to the world of work. Teachers could also bring an occupational "flavor" to their courses; readings, reports, projects, and activities could stress vocational aspects of the subject matter.

Counseling and guidance programs need to be provided at the elementary school level as well as in junior and senior high schools. Counselors are needed to help students evaluate their attitudes and abilities before deciding what to do after completing high school.

Parents, teachers and counselors alike must bear in mind the wide range of individual differences as demonstrated by data from this study. Gardner Murphy and Lois Barclay

Murphy[2] describe the situation in eloquent terms: "Children vary beyond all possibility of adequate description, and there is no likelihood that in our generation we shall know how to set free the potentials of each."

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[2] Gardner Murphy and Lois Barclay Murphy, "The Child as Potential," The Nation's Children, Part 2; Development and Education, Eli Ginzberg, editor (New York: Columbia University Press, 1960), p. 216.

NORTHWESTERN UNIVERSITY

A STUDY OF THE VOCATIONAL AND EDUCATIONAL INTERESTS OF JUNIOR HIGH SCHOOL STUDENTS

A DISSERTATION
SUBMITTED TO THE GRADUATE SCHOOL
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
for the degree
DOCTOR OF PHILOSOPHY
Field of Education

By
STANLEY CURTIS KRIPPNER

Evanston, Illinois
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Always you have been told that work is a curse
And labour a misfortune.

But I say to you that when you work you fulfill a part
Of earth's furthest dream
Assigned to you when that dream was born.

And in keeping yourself with labour
You are in truth loving life,
And to love life through labour
Is to be intimate with life's inmost secret. . . .

When you work with love you bind yourself to yourself,
And to another,
And to God.

And what is it to work with love?

It is to weave the cloth with threads drawn from your heart,
Even as if your beloved were to wear the cloth.

It is to build a house with affection,
Even as if your beloved were to dwell in that house.

It is to sow seeds with tenderness
And reap the harvest with joy,
Even as if your beloved were to eat the fruit.

It is to charge all things you fashion
With a breath of your own spirit. . . .

Work is love made visible.

Kahlil Gibran

The Prophet

CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

What are the most frequently mentioned occupational preferences of junior high school students?

What factors do the students perceive as influencing their preferences?

In what work experiences have the students already participated?

What are the students' educational plans for the future?

What are the students' attitudes towards the courses in which they are currently enrolled?

This study attempts to answer these questions by examining the responses of 351 junior high school students to vocational and educational questionnaires. The study also investigates the responses in light of the sex, mental ability, and academic achievement of the pupil responding.

The 351 junior high school students under investigation comprise the 7th and 8th grades of a suburban Chicago school.

"Vocational" refers to any activity in which a person finds employment and by which he can earn a living on either a part-time or full-time basis. "Vocational" applies to both the part-time jobs students cite in their responses to the questionnaire and to the future careers they mention. In this study the word "vocation" is used interchangeably with "career," "job," and "occupation."

"Educational" refers to the processes of instruction or training and to the institutions in which these processes are carried out. This study investigates students' interests and attitudes concerning their present school, the courses they are taking, and the colleges they hope to attend in the future.

"Interest" has most recently, and perhaps most usefully, been defined as "a disposition or characteristic propensity which propels an individual to seek out particular goals for persistent attention" (522:7).

In regard to the current study, "interest" would apply to many questionnaire responses. A student is asked, "What kind of work do you want to do when you finish school?" His answer of "engineer," "doctor," or "aviator" indicates a vocational interest. A student is asked, "What subject do you like best?" His answer of "science," "mathematics," or "physical education" indicates an educational interest.

IMPORTANCE OF THE STUDY

There are few areas of educational and psychological research more crucial to the individual and to his society than the study of vocational development. Among the current trends making this research an urgent matter are the changing occupational and educational outlooks, the confused role of women workers, the increasing challenge to American security, the high degree of job dissatisfaction, and the vocational uncertainty of today's youth.

I. THE CHANGING OCCUPATIONAL OUTLOOK

At one time or another during the year, almost half of America's population between the ages of 14 and 17 holds either a full-time or part-time job (170). Ninety per cent of these jobs are short-term or part-time occupations concentrated in agriculture or the trade and service industries (170). And each June a greater number of high school and college graduates joins the labor force (170). Furthermore, there will be no sizeable increase in the number of workers between 25 and 44 years of age in the next few years; the increase in the labor force will be made up almost entirely of persons 14 to 24 years of age (and persons over 45) (162:76). Before investigating students' occupational interests, therefore, it would be wise to survey the present occupational outlook.

The U. S. Department of Labor has classified over 20,000 different jobs into seven categories (165:xix). A review of current occupational literature reveals the following outlook (presented by job category).

Unskilled occupations. There will be a decline in the proportion of unskilled laborers in comparison with the rest of the working population (284; 447:5). In actual numbers, the unskilled laborers may not increase at all (470). The trend away from heavy, unskilled labor began in the early part of the century and has accelerated during the past few decades (162:31).

The kinds of jobs which can be filled by inexperienced and untrained workers are diminishing relative to those calling for a higher degree of training (216).

Semi-skilled occupations. Semi-skilled workers are expected to increase (proportionately) more as compared to the unskilled but less than the skilled (469). A numerical increase of about 15 per cent (over those employed in semi-skilled jobs today) is foreseen in the next 20 years (469).

Skilled occupations. In comparison to other jobs, the proportion of most blue-collar occupations (i.e., craftsmen, operatives, skilled laborers) will not change very much (447). However, the proportion of skilled craftsmen will increase considerably (447). One out of every five boys in high school today will eventually make his living as a skilled craftsman (450).

Agriculture, forestry, and kindred occupations. Employment in forestry occupations should remain stable (468). But farm workers are expected to decline considerably both numerically and proportionally (447). At least a ten per cent drop from today's level is foreseen by 1970 (469).

The U. S. Department of Labor (170) advises that "65 per cent of the young people now living on farms would do well to look outside farming for a successful career." A committee report at the 1960 White House Conference on Children and Youth (162:77) stated that "less than 15 per cent of the young people growing up on farms today will be able to become full-time operators or owners of commercial farms or ranches."

Service occupations (domestic, personal and protective service, building service porters and workers, etc.). Most service occupations will just about hold their own in the near future (447). Some fields (i.e., building service, airlines) may increase considerably (169). An overall numerical rise is seen in the decades ahead but there is disagreement as to the extent of this increase (162:31, 447, 469).

Clerical and sales occupations. White-collar jobs (clerical, sales, professional, technical, managerial) have been growing faster than manual occupations although most jobs are still in the latter field (168). Next to professional and technical occupations, clerical and sales jobs are expected to grow most rapidly (447).

The greatest expansion in employment opportunities in this category is expected in the higher-level occupations; the lower-skilled clerical jobs are those most likely to be affected by automation (470). Least likely to be affected are those workers whose jobs require considerable judgment or contact with people (secretaries, receptionists, claim clerks, bill collectors, etc.) (169).

Professional, technical, and managerial occupations. Professional and technical workers are the occupational groups expected to grow most rapidly in the coming decade (470). The employment of scientists, engineers, and technicians is expected to increase twice as fast as the labor force as a whole (216). Business and industry continue to enlist large numbers of graduates (525); able executives and supervisors are in increasingly high demand (31:30).

Increased emphasis on space research and national defense, particularly in the fields of aircraft, missiles, and electronics, will result in a growing need for computers, draftsmen, tool designers, and technicians (automotive, chemical, heating and refrigeration, etc.) in these areas (169).

Technical advances are also responsible for this need. Between 1950 and 1958 the number of professional and technical workers increased by 50 per cent while the number of laborers increased by less than four per cent (162:31).

Teaching will remain the largest of all the professions with a shortage existing at all levels (169). The need for professional workers in the health services is boosted by the rising population, a greater concern for health, and improved living standards. The need especially persists for doctors, dentists, X-ray and dental technicians, physical and occupational therapists, and for nurses (169; 179; 447; 468).

Summary. The U. S. Department of Labor (169; 447) concludes that the outlook will be best for those jobs that require the most education and training. If present conditions persist, there will be a rapid growth of white-collar and slower growth of blue-collar occupations, accompanied by a continuing rise in the skill level for craftsmen (216). In addition, there has been a trend for earning differentials to narrow (168).

Job prospects are best for teachers, engineers, physicists, chemists, mathematicians, sales and clerical workers, technicians, skilled craftsmen, and for those in health service occupations (31:38; 168; 169; 447; 468). The outlook will continue to be excellent in these fields as long as the current emphasis upon education, research, and industrial production persists (468).

On the other hand, the supply is already adequate for lawyers, pharmacists, foresters, and those with a bachelor's degree in the humanities and the social sciences (but not for those with graduate degrees) (468).

Educational requirements for employment in many occupations are rising thus making it necessary for a large proportion of young people to complete high school and college (41:379; 169).

II. THE CHANGING EDUCATIONAL OUTLOOK

Ewan Clague (216), the Commissioner of Labor Statistics, writes that

> The lack of accurate, current, detailed occupational data seriously handicaps our analysis of manpower supply and requirements. . . . It is a remarkable fact that we can pick up the statistical abstracts of the United States and find out that, for example, on January 1, 1958, there were 22,357,000 milk cows in the country. Yet, we do not know with the same exactitude how many physicists we have and how much they earn.

This confusion may partially account for the diverse statements we often find in the occupational and educational literature. Havighurst (506; 507), for example, states that by 1965 the supply of college students will exceed the demand. On the other hand, the Educational Policies Commission (31:38-39) finds that

> There will be 3,722,100 graduates from colleges and universities between 1956 and 1965. Against the reservoir of talent this number represents . . . are insistent demands for new recruits in many fields. . . . For the years immediately ahead the supply of graduates will be distressingly insufficient.

Whatever the future demand may be, it is apparent that college enrollments will increase yearly (376; 451). The situation will be due, in large part, to the marked increase in births dating back to the 1940's (373). In 1960 college enrollment surpassed three and one-half million (345) and is expected to double by 1970 (38; 376). In 1900 about one per cent of America's 22-year-olds were college graduates; by 1960 the proportion had increased to 15 per cent (47:359; 31:38).

Along with the population boom, there are strong socio-economic factors increasing college enrollments. Warner (134:11-24) describes America's "open class system" and lists education as one of the means by which individuals may climb above their parents' social level. Ginzberg (46:48) sees the pursuit of a university degree motivated by a yearning for status as well as by desire for learning and training. A nationwide survey disclosed that 69 per cent of all children under 18 are expected by their parents to go to college (compared with 21 per cent of those between 18 and 21 in college when the poll was taken during 1959) (239). Many of these students do not graduate from college; the drop-out rate is close to 50 per cent (507). Nevertheless, there are indications that a two-year college term will eventually be a social necessity for students with average intelligence of both sexes (376; 436).

With colleges and universities attracting more applicants than ever before it is ironic that the nation should be suffering from a malady of underdeveloped potential (31:41-57). Yet this is the case and it is particularly demonstrable in the cases of the under-educated, minority groups, and the gifted.

The under-educated. It is difficult to believe that America could have large numbers of under-educated citizens. Yet the illiterate population consists of over two million (31:54); another seven million have not gone beyond grade four (31:54). Of those who reach the fifth grade only one-half graduate from high school (506); the median schooling of adult

Americans is 10.8 years--not quite that of a high school junior (299).

Of the 900,000 students who annually leave high school before graduation, 50 per cent have average IQ's or better (172). Unemployment figures for the group are three times as high as for high school graduates (172); juvenile delinquency rates are ten times as high (506). Marriage is not seen as the major cause of leaving school; only 25 per cent of girl drop-outs and less than one per cent of boys list this as a factor (172).

When guidance programs for this group have been inaugurated, excellent results are reported (506). But only about 40 per cent of the drop-outs have received even a modicum of vocational counseling (172).

Ethnic minorities. Opportunities to participate fully in the nation's labor force, at levels of work commensurate with ability, is usually less for minority groups in any society. In the United States, racial minorities and newly-arrived national-origin groups have encountered obstacles to the full development of their talents (31:41).

For example, the occupational distribution of ethnic minorities differs markedly from the rest of the population. Over 40 per cent of the non-white, Mexican, and Puerto Rican workers are farmers, farm laborers, and household workers (31:47). Another example is the fact that although the proportion of adult Negro males in the labor force is approximately the same as that of white males, this proportion drops off more sharply in times of unemployment. This is due to characteristic differentials in layoff rates--based largely on race (31:49).

The Conservation of Human Resources Project, initiated by Dwight Eisenhower when he was president of Columbia University, has labelled the American Negro the nation's most wasted human resource (394). Intellectual achievement of the American Negro pupil is, at the present time, lower on the average than that of the Caucasian (313). But if, through improved social and educational facilities, Negroes could be lifted to the educational level of Northern whites, there would be 147 per cent more Negro college graduates each year (394).

In the meantime, many American Indians, as well as three million Negro children, remain in segregated educational facilities (162:50; 473). The Spanish-speaking Americans in the Southwest, and the newly-arrived Asiatic, European, and Latin American groups are all reserves of talent and ability which, under favorable conditions, could contribute more adequately to the national economy and culture (31:50).

__The gifted__. American educational philosophy has long held that every child should have the opportunity to develop his ability to the highest level (31:97; 467). Yet, large numbers of our most intellectually able students do not enter college. Of the top 30 per cent of the 18-year-old population, one out of four never enters college (221; 467). Of those who do enroll, one out of three never graduates (506). In addition, 20 per cent of the boys and ten per cent of the girls in this college-ability group do not graduate from high school (467). The Educational Policies Commission (31:98) refers to this situation as a "critical waste of manpower resources."

Another waste of ability exists in the area of graduate study. Of all the people in the country qualified to earn a doctor's degree, only two per cent attain it (1:5).

Research in this area has identified some important factors underlying the problem. Economic hardship is often cited but Berdie (192; 193) feels this has been over-emphasized and finds the attitude of the parent a more critical variable. Desire for immediate earnings is important to many of the boys, and marriage plans prevent some girls from going to college (474). But unfavorable academic experiences and emotional immaturity and instability are additional causes for lack of motivation toward college attendance (269).

The situation, it is true, has improved since half a decade ago when half, not a quarter, of the top 30 per cent did not attend college (31:98; 99). But present conditions cause speculation on the extent to which America is fulfilling the ideals set forth in such reports as the Rockefeller study of education (151):

> . . . a free society . . . is the only form of society that puts at the very top of its agenda the opportunity of the individual to develop his potentiality. It is the declared enemy of every condition that stunts the intellectual, moral, and spiritual growth of the individual.

Conclusion. The changing occupational and educational scene demands greater knowledge of youth's vocational and academic interests as well as the personality dynamics beneath these interests.

The soaring college and high school drop-out rates, the under-development of youth from ethnic minorities, and the large percentage of bright youngsters with undirected talents are symptoms of the nation's predicament. Any light which could be aimed at this problem might also serve as a beacon for badly needed educational, vocational, and guidance programs.

III. THE CONFUSED ROLE OF THE WOMAN WORKER

Since the end of World War II, a new pattern of labor force participation by women has emerged. Peak participation begins in the mid-teens, persists into the early '20's, and declines as women leave work for marriage and children. Increasing numbers have been returning to wage-earning occupations as their children reach school age. There is also a tendency for women to remain at work until their later years (31:43).

This situation represents a change from American culture as it was at the turn of the century when work for women was regarded as a threat to femininity, morality, and male supremacy (115). The relatively few women who did work were usually of immigrant stock, members of racial minorities, or farm workers. The majority were employed in factories, on farms, or in household service (115).

During the past half century there have been many factors at work bringing about this change. Economic motivation, the psychological appeal of an independent job, the greater freedom given to women in political, educational, and social areas, the supplanting of many voluntary community workers with professional staffs, demands rising from occupational shortages and from growing industries have all had their effect upon American folkways (28:122-123; 31:43).

The extent of this change can be measured by examining the composition of this army of women workers which now comprises one third of the total labor force (381; 526). In 1900 one out of five women (above the age of 14) worked; 60 years later it was one out of three (28:122; 381). Sixty per cent of this number are married; 30 per cent have children under 18; 50 per cent are forty or older (100; 162:10). Since 1950 the largest source of new workers has been women in their middle and later years (7; 100). Furthermore, this is the area where the greatest future increase is expected (382).

As the occupational scene continues to evolve, there will probably be an increase in the present number of women in education, nursing, clerical and sales occupations, and non-household service jobs (115; 325). Additional openings are seen in professional, technical, and executive fields (162:46; 382).

Critical comment. The influx of women into the labor force has been the subject of heated controversy. Psychologist Anne Steinmann (414) finds that the culture has an "ambivalent approach towards women engaging in professional activities." Anthropologist E. J. Dingwall (28:127) portrays working wives as "always seemingly searching for something they could not find . . . . in spite of the wider range of opportunities offered to women." Psychiatrist A. J. Mandy (343) adds that hard-driving, ambitious, "defeminized" wives are a serious and growing problem; "many wives try to be both career girls and housewives, but few succeed."

The American Institute of Family Relations (230) reports that one out of every three American families is dominated by the wife. Less than one half of these married are found, in a nation-wide study, to be "happy"; male-dominated and partnership marriages received better ratings. Sociologist Helen Hacker (5:14) is alarmed at the number of husbands who have become mere "mother-substitutes" or "nursery assistants."

It seems difficult to cite purely economic causes for the prevalence of wives in independent jobs. The real income of men has risen during the past several decades (7); in addition, three and one half million men are "moonlighters" who hold down two jobs at the same time (5:50). Yet, women are entering the labor market in ever-increasing numbers. Moskin (5:23) summarizes the historical development.

> During World War I, the American woman was called on to do men's work, and the door was opened wide to "emancipation." In the twenties she "went on a rampage," and in a roaring, flaming decade, jobs for women became fair play. Finally the great depression gave women an economic excuse to introduce their husbands to dirty dishes and diapers. . . . Only since the end of World War II has the American woman had a chance to consolidate her gains, relax, and enjoy her now-dominant position. . . . She is now winning the battle of the sexes in America.

American husbands, say some observers, are not the only family members to be adversely affected. An increase in the number of pre-school children has not decreased the number of women taking jobs outside the home (7). In 1948, 12 per cent of mothers with children under six were in the labor force; ten years later it was 21 per cent (162:10). Within the same period there was an 80 per cent increase in the number of mothers with children under 18 going to work (162: 10). A recent study indicates that children of working mothers possess "feelings of isolation" and a higher rate of educational retardation than children of non-working mothers (380).

Critics of the working mother cite evidence that she, as well as her spouse and child, suffers adverse effects. Anthropologist Margaret Mead (91:v) feels that "the wife who found home and career too much to manage" is a common phenomenon in the United States. Mandy (343) states that "other things being equal, marriage is in my judgment the best career for a woman" and feels that husbands do not ameliorate the situation when they shirk responsibility and neglect to give their wives recognition and appreciation.

Steinmann (414) also states that men frequently add to the confusion; they often accept the women's professional role "on a social level" but reject it on an emotional level. Steinmann concludes that

> . . . the drive to free women for professional pursuits (has) . . . worked itself into a drive for financial goals. It seems that . . . the role of full-time homemaker appears infinitely more desirable and satisfying than the combination of family and career.

Favorable comment. Taking a reverse position, the Educational Policies Commission (31:40) feels that increased employment of women outside the home has "advantages to the individual and to society." Opportunities for self-expression and development of potentialities are often cited (31:46; 469). Societal advantages are stressed by Helen Wood (469) who underscores the need for highly-trained women in occupational fields of national shortage. In this connection, Secretary of Labor James Mitchell (353) notes that the Soviet Union employs many more women scientists and engineers than does America.

Business columnist Sylvia Porter (526) minimizes the claim that women are moving into men's jobs. She points out that 70 per cent of working women are in "traditional" female occupations (i.e., secretaries, typists, stenographers, waitresses, cooks, teachers, etc.).

Phyllis Warren's study of housewives (459) found those with outside activities enjoying "higher mental satisfaction than did homemakers only." And motivational research expert Ernest Dicter (230) believes that

> A complete change has taken place in the roles of both sexes since the century began. The American woman has emerged as a balanced person. . . . She has a deep interest in family life but also a responsibility to her community and herself as a person.

Conclusion. The confusion in society's definition of woman's role is probably more complex than the extreme positions would indicate. Allowance must also be made for individual differences; the working wife who is "putting her husband through law school" might have little in common with the mother of three small children who hires a cook, a maid, and a nurse, then leaves for her job at the office. And even the critics do not object to all vocational experiences for women; a job may "fill a void" in the premarital period (414) or be an economic necessity upon the illness or death of the husband. And the fact that America's female population outnumbers its male population by over a million makes a group of fulltime women workers a necessity (162:13).

Greater research into occupational interests and the needs they satisfy for the different sexes will be of help in resolving this dilemma. It is unfortunate that most of the extensive studies being done today concern themselves with male populations only.

Margaret Mead (91:283) offers valuable insight into the situation when she calls upon society to "build a better world by using the different gifts of each sex."

IV. THE CHALLENGE TO AMERICAN SECURITY

On October 4, 1957, the Soviet Union announced the successful launching of history's first earth satellite. America's initial reaction was one of shock; a frequent secondary reaction was the examination of the Soviet educational system. Forgetting that most of the scientists responsible for Sputnik I had been educated under the Czarist regime, many Americans criticized educational "fads and frills" and eulogized the Soviet emphasis upon science, mathematics, and technology.

Soviet accomplishments. One can discover many features of the Soviet system which pose a threat to American security. Graduates of the Soviet equivalent of high school, for example, have taken at least five years of physics, four years of chemistry, and ten years of mathematics--including algebra, geometry, and trigonometry (171:67). In comparison, one out of four American high school students has taken physics, one of three chemistry, and one of eight trigonometry (221).

This predicament is due in part to a decline of the supply of trained faculty; the production of high school science and mathematics teachers has dropped 50 per cent since 1952 (145:159). There is, however, no teacher shortage in the

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U.S.S.R. (446; 523).

Observers of the Soviet scene also report an enthusiastic spirit concerning schooling and an economy which is "education-centered" (523). U. S. Commissioner of Education L. G. Derthick (523) finds that "Education is paramount. It is a kind of grand passion. . . ." Nuclear physicist Edward Teller (452) reports that "a Russian boy thinks about being a scientist like our young girls dream about becoming a movie star." Harvard professor Nicholas DeWitt (446) notes that the U.S.S.R. spends as much money on education as does the United States, although it is less than half as wealthy. DeWitt adds that the Soviets are "training an army of scientists and technologists."

Statistically, the success of this program seems apparent. The Soviet Union has over one half million graduate engineers, most of them in technical activities. The United States has somewhat more but many are in sales and management (353). The U.S.S.R. is graduating three times as many engineers each year as America produces (446). The Soviet Union also graduates more scientists, doctors, and teachers each year than does the United States (353; 446).

Soviet deficiencies. The accomplishments of Soviet education do not blind investigators to its failures and shortcomings. Education in the U.S.S.R. is by no means equalitarian; children of party workers are definitely favored (229). The bulk of Soviet youth is siphoned into trades after eight years of school; only the bright and the favored attend high schools and universities (446). Even this group spends many months learning "the delights of labor" when there is a shortage of factory and farm workers (446). Soviet superiority in some areas stems from the fact that the U.S.S.R. has a larger population than the United States. In actual percentages, 39 per cent of college-age Americans go to school; the Soviet figure is about eight per cent (345).

A Soviet pronouncement has described the study of humanities as being "of secondary importance" and they form a small portion of the curriculum (171:67; 446). Instruction is often unimaginative (229), rote learning is emphasized (446), and social science classes are scenes of Marxist indoctrination (446). The goal of Soviet education is to meet the needs of the state and to serve the policies of the government (171:220). Graduate research, therefore, is invariably aimed at solving problems designated by government committees (229). But despite these deficiencies, the Soviet use of education is a weapon that has presented America with one of its most serious challenges.

American efforts to meet this threat are handicapped by educational problems of its own. Paul Woodring (145 :160) declares that many bright students who would like to become scientists and engineers are finding "doors . . . closed to them . . . because the pre-requisite courses are not available in high school." Gardner Murphy (96:163) disparages the stifling of children's creative efforts. "We find a thousand devices," he writes, "for regularizing, stabilizing, restraining, or even for poking fun at the earliest exploratory efforts of the children who are transported by a great challenge or a great discovery." As a result, many experts find that the nation is faced with vital shortages of the specialized manpower essential to national security (196; 308; 477:15).

Conclusion. Continued research into the field of vocational psychology would better enable educators to stimulate pupils whose inclination is toward fields in which there are national defense needs. It is also important to remember that the United States believes in education for the development of individual capacity, not for the goals of the state (171:220). Therefore, equal encouragement should be given the budding author, actor, anthropologist, and other young people more inclined towards the humanities, commerce, and the social sciences.

Knowledge of students' vocational interests will help the teacher, the counselor, and the parent to give youth every opportunity to choose those occupations in line with their best interests and greatest potentials. Murphy (96:163) reminds us of our responsibility to "encourage, to give freedom, to swing wide the gates wherever the child's or adolescent's mind wants to explore, to make contact, to know, to grasp, to assimilate the new."

V. JOB DISSATISFACTION IN THE LABOR FORCE

In another era, there would have been no concern with the problem of job dissatisfaction. Work was once looked upon as a necessary penance, visited upon Adam and his descendants by a wrathful Jehova (369). Medieval scholars often cited *Genesis* 3:17-19.

> And to Adam He said, "Because you have listened to the voice of your wife, and have eaten of the tree . . . in toil you shall eat of it all the days of your life. . . . In the sweat of your face you shall eat bread till you return to the ground. . . . You are dust and to dust you shall return."

For centuries this interpretation molded western man's attitude toward his occupation and, to some extent, still persists.

Vocational psychology, on the other hand, has stressed the satisfaction to be found in one's job. Hamrin and Paulson (54:288) emphasize the necessity for the vocation to give "a feeling of dignity and of personal worth . . ., as much opportunity and initiative and imaginative activity as his personality requires." The individual who does not receive those rewards from his work "must offset that distress by emotionally satisfying avocations or outside interests if he is to find any kind of emotional satisfaction in life."

Lack of satisfaction may be a correlary of the current mental health debacle in industry. Termed "industry's three billion dollar problem" by one observer (349), emotional illness causes more absenteeism than any other illness except the common cold (349). Many studies indicate that emotional instability and job dissatisfaction are related (61:26); in many instances the difficulty has its source outside work but is aggravated by a tense, unpleasant working situation (349).

Extent of dissatisfaction. Over 400 studies of job satisfaction have been made in the past 25 years (384). The median percentage of dissatisfied workers has fluctuated between 12 and 13 per cent for the past seven years (383; 384). However, the median for the 1959 studies was 23 per cent (384) and Strong's recent research (122:112) disclosed 21 per cent "definitely dissatisfied or moving in that direction." Strong's concept of occupational satisfaction is described in terms of the difference between what an individual wants from the world of work and what he thinks he is getting (122; 423).

Factors associated with dissatisfaction. Along with mental health, other factors are seen to influence one's attitude toward his job. Among white-collar workers, physicians rate their satisfaction highest of all, clerical employees lowest (122:116). The dissatisfied show a tendency to be less religious (61:28) and to enjoy human relationships less (61:29). Those who selected their own vocations enjoy their work more than those whose work was "thrust upon them" (61:37-38).

Satisfaction is high at the beginning of one's career and again after the age of about 55 (429). Men whose interests and abilities correspond to their occupations have high satisfaction scores (122:114; 429). Robinson (383) finds little evidence to indicate a relationship between pay increments or increased job status and satisfaction, but Inlow's data (298) suggests that salary and status are influential in combination with other factors.

Patterson (369) describes the different types of satisfactions which characterize occupational groups. Professional workers seem to emphasize intrinsic satisfactions (i.e., enjoyment of the work itself) while blue-collar workers cite extrinsic rewards (i.e., enjoying the monetary results of their work). Patterson points out that the history of industrialization has tended to reduce the intrinsic rewards of work--where job satisfaction ratings are highest. To prevent a "divorce of the job from the rest of the worker's life," Patterson suggests greater emphasis on social and recreational activities, as well as profit-sharing programs, for the 75 per cent of the nation's jobs "requiring routine, concrete, organized activity."

Of great significance is Super's discovery (429) of two occupational scales. On the white-collar scale, representatives of professional occupations appear most satisfied and commercial workers least satisfied. On the manual worker's scale, the greatest degree of satisfaction is found among skilled workers, the least among unskilled. Super also notes that the "lack of similarity of job requirements to individual abilities and interests" is the prime reason for job dissatisfaction.

Conclusion. The results of Super's study (429) indicate the great need for knowledge about the occupational interests and aptitudes of youth. If special skills and abilities were more closely linked with vocations, we would expect a decrease in the amount of job dissatisfaction.

It is also noteworthy that the proportion satisfied decreases from the professional to the laboring classes (117: 267; 369). Yet few of the over three million citizens presently unemployed are professional workers (410). To the contrary, there is a void in highly-trained personnel and it seems ironic that there should be so many jobless when America is faced with a manpower shortage.

Perhaps accurate information and adequate guidance programs could help meet this manpower shortage, decrease unemployment, and increase occupational satisfaction by a better matching of individual workers with their jobs.

VI. THE VOCATIONAL UNCERTAINTY OF YOUTH

There are many societies where there is no occupational choice. The division of labor is based upon sex, age, and caste (46:3). Until recent decades, occupational choice was a simple matter in the American culture (106). A middle class lad could depend upon connections or opportunities to a greater extent than can his 1961 counterpart who finds necessity of choice, often at an early age, has paralleled the growth of an industrialized, specialized economy (46:3; 484:119).

Unfortunately, this choice must frequently be made when the individual is ill-fitted to do so. He may understand neither the complex nature of the occupational world nor his own unfolding desires, inclinations, and feelings (46:5-6). The ninth grade is sometimes designated as a time when tentative choices must be made and appropriate curricula chosen. But Super (126) finds this age group far from ready to make vocational decisions.

As high school proceeds, additional resolutions must be made but many of them are inadequate and confused. Jones (485:455) found, for example, that 30 per cent of those planning to go into the professions did not intend to enter college. Twenty per cent of those going into skilled or semi-skilled trades had planned a college education.

Occupational confusion. Schmidt and Rothney (392) report that two out of three students change their vocational plans at least once while in high school. Rosenberg (181) finds that 60 per cent of college students switch choices within a two-year period. A follow-up study of Wisconsin youth shows less than half entering the occupations they had "chosen" while in high school (392). An even smaller number of Minnesota young people, in a different study, are discovered working in the vocations they had favored during high school (182).

Havighurst (484:119) also finds much "fumbling about" and states that choosing an occupation is often a more difficult task than the actual preparation and training. Remmers and Radler (104:143) reveal that over 50 per cent of teenagers want to learn more about their abilities and appropriate vocations. Another survey indicates that 56 per cent are in doubt about their post-high school plans (76).

Educational confusion. Over 33 per cent are reported by Remmers and Radler (104:143) as being in conflict over whether or not to attend college. Of those deciding to go, 59 per cent want to know what vocation to choose. Nearly two-thirds of the non-college group ask the same question. Additional research indicates that large percentages of high school and college students are in doubt concerning their future vocation (163; 311; 408; 440). Thompson (440) admits that social and sexual problems are of more immediate importance to the teenager; but there is no doubt that bewilderment is generated by long-range educational and occupational considerations.

Conclusion. Boys and girls in one study asked, in large numbers, for "more vocational guidance and placement" (163). Although vocational programs are still inadequate in most parts of the country (353; 524), they are seen as one answer to the situation (31:106).

Frank Parsons, who established a vocational bureau at the Boston Civic Service House in 1908, is credited with inaugurating the guidance movement in America (439). Parsons (368) announced that his aim was to "aid young people in choosing an occupation, preparing themselves for it, finding an opening in it, and building up a career of efficiency and success."

Within 50 years, guidance services were available to half of America's secondary school pupils (353). However, this represents only 17 per cent of the nation's schools. And many counselors have case loads far in excess of the one counselor per 250 students suggested by James Conant (20).

Thompson (439) has formulated a sound rationale for vocational guidance:

> As a necessary service in a democratic society based on individual freedom of choice, vocational guidance has the function of helping individuals make more effective decisions and plans . . . by facilitating a clearer understanding of themselves and their roles in the world of work.

Research into vocational development and the evolution of occupational choice is necessary for guidance to do its task effectively. The present study proposes, as a small part of the needed research, to investigate the vocational and educational interests of 351 junior high school students. Differences in responses will be analyzed according to sex, mental ability, and academic achievement. In addition, the group's answers to five important questions will be tabulated.

1) What are the most frequently mentioned occupational preferences of junior high school students?

2) What factors do the students perceive as influencing their preferences?

3) In what work experiences have the students already participated?

4) What are the students' educational plans for the future?

5) What are the students' attitudes towards the courses in which they are currently enrolled?

The next chapter will review pertinent literature regarding vocational interests. Chapter three will describe the study and present the results. Chapter four will deal with implications of the research while the final chapter will suggest additional investigations which would seem advisable.

The author strongly believes that the assimilation of factual material concerning youth's occupational development will help meet the needs brought about by the current vocational and educational changes, the confused role of the woman worker, the threat to American security, the existing amount of job dissatisfaction, and the uncertainties faced by today's boys and girls as they face their educational and occupational future.

The discovery of capacity and attitude will be a constant process as long as growth continues. . . . One has discovered in himself, say, an interest, intellectual and social, in the things which have to do with engineering and has decided to make this his calling. At most, this only blocks out in outline the field in which further growth is to be directed. It is a sort of rough sketch map for use in direction of further activities.

John Dewey
Democracy and Education

CHAPTER II

REVIEW OF THE LITERATURE

As an indication of what he calls "our lack of scientific thinking in regard to the function of labor," Karl Menninger (93:158) cites a "colossal ignorance and neglect of the problem of vocational choice." Lloyd Meadow (347) concurs, stating that the practice of vocational guidance is far ahead of a theoretical rationale for that practice. Before beginning a systematic scrutiny of vocational research, it would be wise to investigate the theoretical formulations which have stimulated some studies but which have fallen behind a considerable body of current research.

THEORIES OF VOCATIONAL DEVELOPMENT

Philosophical speculation about man and his life work dates back to the Old Testament. Proverbs 28:19 declares

> He who tills his land will have plenty of bread, but he who follows worthless pursuits will have plenty of poverty.

And in the *Dialogues*, Plato (490:273) asks

> What ought the character of a man to be, and what his pursuits, and how far is he to go, both in maturer years and in youth?

Concern with the nature of mankind's toil is also found in the writings of Aristotle and Augustine, of Hobbes and Hegel.

The growth of the social sciences within the last century has expanded the literature in the field of occupational theory (55:346). William James (68) found the roots of vocational activity in such "instincts" as constructiveness, acquisitiveness, and curiosity.

Harry Dexter Kitson (77:142), one of the first to investigate this area systematically, felt that vocational development was largely the result of experience. Vocational interests were seen to grow as the individual's experiences changed and broadened. Kitson (310) stated that "the concept of evolution may well be applied to the vocational choices of many individuals." He saw the role of a vocational counselor as encouraging this evolution, discovering available vocational outlets and helping the client to take an interest in them (309; 311).

The voluminous research of Witty and Lehman (465) served as the basis for their conclusion that attitudes towards occupations are acquired "in much the same manner that other learning is acquired--by a rather long process of trial and error." Other psychologists, notably Donald Hebb (57), continue to use insights from learning theory in this field. Hebb finds the "immediacy" of satisfaction more evident in "play" than in "work."

Sociologists such as W. L. Warner (135) often stress factors of social class and mobility when they write about occupational entry. Other social scientists sometimes view vocational maturity as growing into a "way of life" (228).

Some economists writing on this issue see vocational choice as dependent upon the law of "supply and demand." Clark (18) and others feel that the economic situation is a far more important determinant than any number of personality factors.

At one time it was common for vocational counselors to accept at face value the client's explanation of why he chose a vocation (347). Also in vogue was the "accident theory" which reflects Stone's (420) statement that

> Choices of a vocation are generally made by students for adventitious reasons and incidental motives, in partial or almost total ignorance of the activities, requirements, possibilities, and limitations of the vocations that they choose.

Super (124:402) cites the publication of a paper by Carter (210) in 1940 as the "forerunner" of recent vocational theories. One of the first published attempts to synthesize findings concerning occupational development, Carter holds that vocational maturity depends upon other aspects of the individual's maturation. Among these are age, intelligence, aptitude, and school experience (161:257; 210).

Other formulations have been expressed by Berdie (191), Bordin (199), Darley (22), and the writers discussed in greater detail on the following pages.

An overview of the literature will disclose some qualified writers who have taken rather unique points of departure. Michel Gauquelin (43), for example, claims to have statistical proof that the positions of the planets at the time of a person's birth affect his later life work. Significant correlations are reportedly found between the dominant influence of Mars and careers in athletics, Jupiter and acting, and Saturn and the clergy. Psychologist Gina Cerminara (17) utilizes the concepts of "kismet" and "reincarnation" to explain vocational calling; a person's status in a "previous life" is seen as bearing upon his present occupation.

The bulk of research, however, supports theories which place vocational growth in the context of total personality development and the satisfaction of personal needs (55:28). Hamrin and Paulson (54:288) reflect a characteristic point of view.

> Because nearly every adult spends the major part of his time and his energy at work, his welfare as an individual dictates the wisdom of finding work which gives self-expression. . . . Anyone who can say "I like my work," is finding emotional satisfaction in his job, and anyone who cannot say that is undergoing a certain amount of emotional frustration.

In order to appreciate specific data applying to vocational interests, it would be wise to continue investigating theories of occupational choice. Perhaps the most influential authors in this area have been Donald Super, Anne Roe, Eli Ginzberg, and the psychoanalytic writers.

The psychoanalytic writers: occupational choice as a response to unconscious drives. When psychology emerged as an independent scientific discipline in late-nineteenth century Germany, it defined its task as the analysis of consciousness

(95:1-5; 53:29). Sigmund Freud, however, attacked this view by likening the mind to an iceberg in which the smaller part showing above the surface of the water represented the region of consciousness. The much larger mass beneath the water level represented the unconscious (53:29). In 1915 Freud (482:428) wrote

> How are we to arrive at a knowledge of the unconscious? It is, of course, only as something conscious that we know anything of it, after it has undergone transformation or translation into something conscious. The possibility of such translation is a matter of everyday experience in psychoanalytic work.

Unconscious processes, then, are the major concern of psychoanalysts (9:26) and the aim of psychoanalysis is defined as helping the patient toward a better integration of his own life and towards a better relationship with his environment (9:15).

Of great interest to the psychoanalyst is the occupation of the patient. And of major importance in the choice of one's career are his unconscious drives. Psychiatrist Karl Menninger (93:161) states that "we know that beneath the conscious and therefore more superficial determinants there are unconscious motives which strongly influence . . . vocational choice. . . ."

An early writer in this field was Dr. A. A. Brill, a lecturer on psychoanalysis at New York University who translated many of Freud's major works into English.

Dr. Brill (15:313-315) sees vocations as harnessing the unconscious drives of the individual and directing them into useful channels.

> For it is known that all our actions are psychically determined by unconscious motives, that there is no psychic activity which does not follow definite paths formed in the individual since his childhood, and as work or profession is nothing but a sublimating process . . . we may assume that it also must be guided by the individual's unconscious motives.

Brill (15:315) notes that many people, when asked why they follow a certain career, answer that they do not know. "On applying the psychoanalytic method, however, one usually finds some hidden reasons for the particular activity."

Although the reasons are hidden, they are, for the normal person, wise and useful. No person, therefore, should be told what vocation to follow as he usually "senses best" the course to take. Brill (15:332) describes a young man forced by his father to become a pianist. As he grew older, he tried other professions, failed in each, and returned to music. Upon his father's death, he went into the insurance business and, for the first time in his vocational history, did extremely well.

Brill (15:315, 327) warns us not to attribute all vocational choices to the same specific drive because "every vocation is individually determined." He notes, for instance, that many street-cleaners choose their careers because they unconsciously retain infantile anal interests. However, one street-cleaner Brill interviewed was an avowed anarchist; "his vocation was an unconscious effort to clean up the rottenness of society which seemed to trouble him so much."

Some doctors are influenced toward surgery because of the sadistic components of their personalities. Those with similar feelings of sadism but with less mental ability often become butchers; "the surgeon and the butcher have both conquered their sadistic impulses and sublimate the same for useful purposes" (15:317).

Sadistic outlets may also be found in prize-fighting, bull-fighting, wrestling, and hunting. Even the spectators at fights are giving vent to sadistic tendencies (15:317).

Sublimation of infantile exhibitionism often impels one to become an actor, a professional athlete, or an army officer (15:321). Other childhood traits may find similar vocational satisfactions.

> Thus I know of a maker of optical instruments, a successful manager of a big camera department, and three photographers who were punished in childhood for evincing a strong curiosity for sexual looking. . . . I have reported the case of a man who displayed in early childhood a strong perverted impulse for odors, who became a successful perfume dealer. . . . Unconsciously, such people take up the vocations that gratify them in sublimated form. The reader need not be surprised and shocked merely because some people who are doing useful work merged into it through sexual impressions of childhood. . . . Some of the most sublime institutions in this world had their origin in sex (15:323).

The profession of law is sometimes taken up as a reaction to a dishonest act committed in childhood. Unconscious feelings of guilt are frequently the bases for theological "callings" (15:327).

The foundation of Brill's interpretation is that there is always some unconscious determinant which lays the foundation for one's vocation. If not interfered with, the individual is unconsciously guided to express his sublimation in that particular form (15:328).

Some writers have attacked Brill for his lack of experimental data. But Brill (15:328) states that his psychoanalytic experience "has convinced me of the truth of these assumptions."

Many other psychoanalysts, psychiatrists, and psychologists have joined Brill in viewing vocational choice as a response to deep-seated unconscious drives. Korner (315) points out that obsessional individuals may gravitate toward detailed, systematic tasks while dependent individuals often work with children, thus yielding to others "what was denied them in their youth."

Mackay (341) finds that many farm boys enter mechanical trades; he hypothesizes that they may have rebelled against farm life and chose mechanics because of their experience with tractors and cars.

The literature includes many case studies in which the writer follows development of unconscious motives into vocational expression. Szasz (127:121-122), for example, cites a patient whose interest in sociology reflected "a remarkable inhibition of his ego-orientation towards his body." He was interested in human misery (because his mother had been convinced he would die at an early age) but directed his interest towards others because interest in his own body (*i.e.*, masturbation) had been prohibited. Ernest Jones (73: 601) describes a successful engineer whose specialization in bridges and canals dated back to a childhood interest in urination and "the guidance and force of its flow."

Cantela (204) finds that vocational interests based on unconscious drives are often unrealistic, thus taking issue with Brill's statement (15:328) that these interests are gratifying sublimations and "proper outlets." One of Cantela's clients was interested in architecture but had no talent along this line. Unconsciously, buildings seemed to "symbolically represent the female figure" to the client. He had decided to be an architect shortly after his mother became ill; his vocational choice was, perhaps, a symbolic attempt to "rebuild" her.

Dragow (238) also takes issue with Brill, stating that *several* factors may be responsible for occupational selection--aptitudes, family background, social status, as well as unconscious needs. He cites Freud's principle of overdetermination (several factors operating to produce a given condition) to support his theory.

In 1920 Freud (481)659) described two basic forces shared by all humanity: the "life instinct" (love, creation, etc.) and the "death instinct" (hate, destruction, etc.). This concept is used to explain vocational satisfaction by Dr. Karl Menninger, Chief of Staff at Topeka's famed Menninger Clinic.

Agreeing with Freud that safe means of channeling the death instinct must be found, Menninger (93:134) writes that "of all the methods available . . . work takes first place." In contrast to purposeless destruction, work molds and guides aggressive impulses "in a constructive direction" (93:136).

> When the doctor administers quinine for malaria or arsenic for syphilis, he is using a refined type of aggression, displaced from its original unconscious aim and directed toward an actual dangerous foe. And just as the doctor combats disease and the agents of disease, so the teacher combats ignorance, the lawyer crime, the economist poverty, and the minister vice. . . . And in all of these activities the worker, by using his aggressive energies to save others, is saving himself. (93:163).

Other psychoanalysts are often cited. Alfred Adler (2:12), for example, felt that the child's mother was the first major influence in the development of occupational interests and that the first five years of life were the most decisive in this sphere.

> If ever I am called on for vocational guidance, I always ask how the individual began and what he was interested in doing his first years. His memories of this period show conclusively what he has trained himself for most continuously; they reveal his underlying scheme of apperception.

One early investigator was so sure that vocational interest resides in the unconscious that he connected the client with a galvonometer, presented objects associated with various vocations, and observed the reactions. He deduced from the swing of the galvanometric needle which vocation the individual unconsciously preferred (311).

Later refinements of psychoanalytic interpretation have found favor with many vocational counselors. Everett (501:71) feels that unrealistic career ambitions may be due to such motives as sibling rivalry, over-identification with the father, early traumatic experiences, internalized parental ambitions, and the need for substitute satisfactions. As an example of the latter situation, Everett describes the girl who became a nurse not for her interest in the vocational work itself but because of the symbolic purity of the white uniform. Although experimental work in this area is "virtually non-existent," Everett (501:83) calls for "the application of the psychoanalytic method, especially in those cases of unrealistic ambitions, many of which originate in personality factors inherent in the individual himself."

Meadow (347) formulates several psychoanalytic hypotheses which he feels could be experimentally investigated.

1.) The independent person rather than the dependent person will seek self-employment.

2.) The aggressive person may choose a highly competitive occupation (such as sales or advertising) where his aggressive needs may be satisfied.

3.) The reactive-type person may seek an occupation requiring a compulsive type of job performance. An example of this would be the man who becomes a policeman to avoid becoming a criminal.

An important contribution offered by psychoanalytic theory, continues Meadow (347), involves the counseling process. If the counselor understands his own occupational development, he will be less likely to project his conscious and unconscious choices into the vocational counseling situation.

Whatever position today's vocational counselor takes regarding psychoanalytic doctrine, he would probably agree with Freud's emphasis upon occupational satisfaction. Erikson (36:229) relates how Freud was asked what one must do in order to be considered genuinely mature. Freud's reply was brief and to the point. "Lieben und arbeiten," he replied. "Love and work."

Eli Ginzberg: occupational choice as an irreversible, developmental process. Dr. Eli Ginzberg (267), professor of economics at Columbia University, finds little merit in the psychoanalytic approach because "the psychiatrists explain too much too simply." Instead, Ginzberg has based a "general theory" of his own upon a systematic study of male subjects from sixth grade through college. Interviews and case studies were utilized to arrive at several conclusions concerning occupational choice.

Ginzberg's outstanding conclusion (46:185) is that occupational choice is a developmental process. "It is not a single decision, but a series of decisions made over a period of years." This development is largely irreversible because each decision made during the process ends in a compromise between interests and aptitudes, between social prestige and realistic opportunity.

The process of occupational decision-making, states

Ginzberg (46:186), can be analyzed in terms of three periods: fantasy, tentative, and realistic. During the fantasy period the child believes that he can be whatever he wants to be. He cannot assess his capacities or vocational opportunities in light of realistic limitations.

During the tentative period the individual realizes he must decide on a future occupation. However, he still thinks in subjective terms, first in terms of interest only and later with reference to abilities and values.

A transition to the reality stage follows and includes three substages.

1.) The exploration substage, in which interests, capacities, and values are tested in the real world of work.

2.) The crystalization substage, in which the individual commits himself to a vocational objective.

3.) The specification substage, which involves specializing and planning as means to secure one's place in the chosen field.

Ginzberg's experimental group was going through the exploration substage at ages 17 and 18; crystalization was generally reached between the ages of 19 and 21. Ginzberg (46:198) states that the whole process of occupational selection takes a minimum of six years and, more typically, about ten years. In maturational terms, Ginzberg (46:60) equates the fantasy period to pre-adolescence, the tentative period to adolescence, and the reality period to young adulthood.

Ginzberg's research (46:205-208) indicates that young people in all socio-economic groups go through this process even though their interests and final choices may be vastly different. Those who deviate most from the developmental stages do so because of personality factors, not because of socio-economic differences. Especially hampered in vocational development are those young men unable to make proper identifications.

During the fantasy period, for example, the occupational goal is often connected with an adult--the father, a sports star, or an admired neighbor or relative. During the exploratory period it is common to seriously consider the father's work although it is usually rejected. At the beginning of the realistic period, the influence of a popular high school or college teacher may be seen.

The process of identification also occurs in counseling. The student may not adopt the counselor's job as his own, but he may absorb some of the values and ideas brought out in the counseling interview (46:208).

In addition to those who fail to make proper identifications, there are others who cannot arrive at a successful occupational solution because of "pathological passivity" (46:212). Bereft of initiative, they wait to be propelled by external forces. They fail to acquaint themselves with reality situations and lack the motivation to develop their personal resources.

Ginzberg (46:219-220) cites three major components of work satisfaction.

1.) Monetary returns (salary, wages, benefits).

2.) Intrinsic satisfactions (enjoyment of the work activity itself).

3.) Concomitant satisfactions (pride in the organization, social prestige resulting from the job, pleasant working conditions, satisfying personal relationships, etc.).

The "work-oriented" person is more concerned with intrinsic satisfactions than the "pleasure-oriented" person who searches for high monetary returns and concomitant satisfactions. The "work-oriented" person also differs from the "pleasure-oriented" in making the occupation an integral part of his life, a means of self-expression. The "pleasure-oriented" individual finds his greatest satisfactions outside his occupation. He is less able to postpone his gratifications than the "work-oriented" person and thus finds it difficult to discipline himself to the work situation (46:208).

In a final suggestion to the vocational counselor, Ginzberg (46:246) urges that more emphasis be placed on values and goals in helping a client mature vocationally.

The essential element in occupational decision-making is

> . . . the effective linking of present action to future objectives. Certainly capacity and interests must be considered. But the individual will not make an effective occupational choice unless he has support from his value scheme.

Since the publication of Ginzberg's theory, much discussion has been stimulated both in support and in refutation of his point of view. Meadow (347), in summarizing criticisms of Ginzberg's work, states that the research design was poor, the methodology faulty, the sample population inadequate, and that emotional determinants were ignored.

Chown (214), on the other hand, reports his findings with a group of English grammar school children. After examining the expressed vocational preferences of both boys and girls, Chown found "moderate congruence" with Ginzberg's "periods" of choice.

Super (125:285) feels that Ginzberg has made an important contribution to the study of vocational development. But he criticizes the Ginzberg study for not describing more fully how "the compromise between needs, interests, aptitudes, values, and external reality" takes place. Super also feels that Ginzberg underrates the importance of childhood experiences and claims that the process is not so much one of "compromise" as of "synthesis."

In a final judgment on Ginzberg's work, the _Encyclopedia of Educational Research_ (53:346) states that "if the effectiveness of a theory is in terms of the research generated by it, then . . . Ginzberg . . . has been successful indeed."

Anne Roe: occupational choice as a fulfillment of basic needs. Dr. Anne Roe (107; 387), professor of psychology at New York University, applies A. H. Maslow's personality theory to occupational selection. Maslow (90) views the individual as an integrated, organized entity with certain basic needs. These needs may be arranged in a hierarchy of prepotency; the more insistent needs must be relatively satisfied before the others may emerge as consistent motivators of behavior. In order of their potency, these basic needs are:

1.) the physiological needs (for food, water, rest, *etc.*).

2.) the safety needs (freedom from danger, illness, insecurity, *etc.*).

3.) the belongingness and love needs (affectionate relationships with other people; sexual expression).

4.) the esteem needs (desire for achievement and for recognition).

5.) the need for information (curiosity).

6.) the need for understanding (interpretation of the environment in terms of some religious or philosophical framework).

7.) the need for beauty (esthetic desire; freedom from ugliness).

8.) the need for self-actualization (fulfillment of an individual's creative capacity). Maslow (90:91) states that "a musician must make music, an artist must paint, a poet must write, if he is to be ultimately at peace with himself."

A man's needs for food and drink must be satisfied before he can think intensely about achievement. Of direct importance for occupational choice is the fact that the higher needs (for understanding, for beauty, *etc.*) are much stronger in some individuals than in others. Roe (107:29, 34) feels that the strength of the self-actualization need may well be the key factor in differentiating those who put enormous, enjoyable effort into their work from those who do not.

Roe (107:31) speculates that there is no situation which is potentially so capable of giving some satisfaction to all basic needs as a person's career. However, with the increasing number of mechanical and assembly line jobs, there is an inevitable increase in unhappy, unfulfilled people.

Centers' study (213) is cited by Roe in support of her theory. He found a significantly greater degree of job satisfaction among professional and white-collar workers than among manual laborers. When asked what kind of job they would prefer, the manual workers typically chose a job they could be "absolutely sure of keeping" while the higher occupational groups chose jobs offering "interesting experiences" and "opportunities for self-expression." Centers concluded that

> The findings of this survey of motives are rather strikingly in harmony with a theory of motivation advanced by A. H. Maslow who holds that motives in the individual are organized into a hierarchy of prepotency. . . .

Because an occupation is so closely tied to the fulfillment of basic needs, Roe (107:315-318) speculates that a job title may be a sounder label than anything currently being used in psychological nomenclature. Roe (107:143-152; 385) has classified all occupations into each of two categories, one referred to as "level" and the other as "group." Classification into six levels was done to reflect each job's degree of personal autonomy and its required skill, training, and education. Thus Level 3 is indicative of more job freedom and higher education than Level 5. These six levels have been briefly described as

1.) High-level professional and managerial.
2.) Medium-level professional and managerial.
3.) Semi-professional and small business.
4.) Skilled occupations.
5.) Semi-skilled occupations.
6.) Unskilled occupations.

Roe's eight groups are used to indicate the primary focus of activity in the occupation.

I.) Service occupations are concerned with serving and attending to the personal tastes, needs, and welfare of other people.

II.) Business Contact occupations concern the face-to-face sale of commodities, investments, real estate, and services.

III.) Organization occupations are the managerial and white-collar jobs in business, industry, and government.

IV.) The Technology group includes occupations concerned with the production, maintenance, and transportation of commodities and utilities.

V.) Outdoor occupations are primarily concerned with natural resources, with animal husbandry, and with the cultivation, preservation, and gathering of crops.

VI.) Science occupations deal with scientific theory and its application (under circumstances other than technology).

VII.) The General Cultural occupations include education, law, journalism, the clergy, and other occupations involving the preservation and transmission of the general cultural heritage.

VIII.) Occupations dealing with Arts and Entertainment include those primarily concerned with the use of special creative and performing skills.

Roe's classification has won approval from many vocational psychologists. But Moser (357) and Super (125) have suggested revisions which they claim will lead to greater accuracy and ease in classifying jobs. Super (125:47) terms Roe's system "the most logical and practically useful two-dimensional classification available." But in addition to levels and groups, Super would add a third dimension, that of enterprise.

> Work varies with the enterprise in which it is carried on. The civil engineer who works for the National Park Service on conservation projects has a workplace, associates, and routine quite different from those of the civil engineer who works in a construction company. . . . Even clearer is the contrast between the work of a physician employed as chief of professional services in a government hospital with a considerable volume of administrative work, and that of his colleague in private practice with a secretary to keep his records and medical rather than administrative decisions to make.

Super's enterprise dimensions are mining, construction, manufacturing, services, government, transportation-communication, wholesale-retail trade, agriculture-forestry-fisheries, and finance-insurance-real estate.

Moser's suggestions (357) resulted from a reliability study and were incorporated by Roe into her classification as outlined above. Examples of each level and group follow (107:151; 357; 384).

	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6
GROUP I	counseling psychologists	social workers	YMCA officials	policemen	waiters	watchmen
GROUP II	promoters	public relations workers	auto salesmen	auctioneers	peddlers	newspaper boys
GROUP III	Cabinet members	union officials	caterers	cashiers	typists	messenger boys
GROUP IV	chief engineers	ships' officers	aviators	electricians	truck drivers	unskilled laborers
GROUP V	consulting specialists	landscapists	game wardens	miners	gardeners	lumberjacks
GROUP VI	research scientists	pharmacists	weather observers	technical assistants	hospital attendants	non-technical helpers
GROUP VII	professors	teachers	reporters	law clerks	library attendants	copyboys
GROUP VIII	creative artists	athletes	interior decorators	photographers	clothes models	stagehands

Roe (107:153-248) cites studies showing that intelligence, education, and socio-economic status are more closely related to level than to group. On the other hand, interests and attitudes are more closely related to group than to level. As the role of experience is particularly crucial in the development of individual differences in interest, Roe feels that the timing of the emergence of basic needs and the initial satisfaction or frustration of these needs is of crucial importance.

As regards the origin of special abilities and interests, Roe hypothesizes a genetic factor which is present at birth, but which is plastic enough for its expression to be directed by emotional needs into particular channels. For example, an early differentiation in orientation of attention is between persons in the child's environment and things. A family situation in which the child is loved adequately and approved (but not made the focus of any intense personal relationship) seems to permit a child's attention to focus upon other items in the environment. From this may develop mechanical and scientific interests--and the selection of occupations in Groups IV, V, and VI (Technology, Outdoor, and Science).

On the other hand, if the child is involved in intense positive or negative personal relationships, his attention may be concentrated upon these relationships. If there are conflicts centered around dominance, he may find occupations in Groups I and VII (Service and General Cultural) most satisfactory. When the experiences with dominance are not unacceptable, he may choose occupations from Group II (Business Contact) and some from Group III (Organization). Incorporation of submissive attitudes may lead to subordinate roles in any Group, but particularly in Group III (Organization). If a child's attention becomes concentrated not upon relations with others but upon himself, he may develop the narcissistic tendencies Roe feels characterize persons in Group VIII (Arts and Entertainment). However, Roe (107;167) observes that the greatest artists are also the least neurotic.

> . . . it is theoretically probable that those who are freed for creative work through lower need gratification can produce more effectively and with infinitely greater end-satisfactions than those whose creativity is in spite of, or perhaps partly marshalled by, a hunt for substitute gratifications. Maslow believes that the creative productions of need-gratified persons can be distinguished from those of others, and personal observations accord with this.

Grigg (290), in a test of Roe's hypothesis, found that women who study nursing do not report significant and characteristic differences in their early experiences with parents when compared to those women in science and mathematics. Grigg states that "variables other than experience of parental reactions during childhood are more pertinent to adult occupational choice."

Roe (386) replied to the Grigg criticism by stating that men should have been used in the study because "the whole situation is very much more complex with women. . . ."

Roe (109:35) concludes by urging that appropriate and satisfying occupations be available for all members of the culture. She believes that if more of the dull and distasteful jobs can be removed by mechanization, attainment of this ideal is not impossible. Maslow's feelings are again echoed by Roe when she states that "genuinely creative behavior can probably emerge only at the level of self-actualization."

__Donald Super: occupational choice as the implementation of a self-concept__. Dr. Donald Super, Columbia University professor and research psychologist, deplores the fact that counselors lack an adequate theory of vocational behavior. An adequate theory, Super (154:1) believes, should propose explanations of the processes underlying vocational selection and occupational adjustment. In addition, it should formulate testable hypotheses for research.

Super (154; 430; 433) has presented a framework upon which he feels a theory can be constructed. At the foundation of his framework is the thesis that the process of vocational development is essentially that of developing and implementing a self-concept. In addition he states several conclusions based on previous research.

1.) People differ in their abilities, interests, and personalities. Each person is qualified, by virtue of these characteristics, for a number of occupations.

2.) Every occupation requires a characteristic pattern of abilities, interests, and personality traits, with tolerances wide enough, however, to allow both some variety of occupations for each individual and some variety of individuals in each occupation.

3.) Vocational preferences and competencies, the situations in which people live and work, and hence their self-concepts, change with time and experience (although self-concepts are generally fairly stable from late adolescence until late maturity), making choice and adjustment a continuous process.

To Super (154:47; 433) the self-concept ("what the person conceives himself to be") is a product of the interaction of inherited abilities, neural and endocrinal makeup, opportunity to play various roles, and the extent to which these roles meet with the approval of others and satisfy personal needs. Vocational roles may be played in fantasy, in counseling interviews, and in real-life activities such as school classes, clubs, part-time work, and entry jobs. The occupational choice itself is seen by Super (433) as a point in life when "a young person is called upon to state rather explicitly his concept of himself, to say definitely, 'I am this or that kind of person.'"

Super (154;40-41) concludes that the factors of growth and learning operate interdependently to expand the individual's behavior potential, thus affecting his self-concept. Super finds it necessary to divide vocational development into a series of "life stages." Borrowing descriptive terminology from the work of Charlotte Buehler and Eli Ginzberg, Super arrives at a hypothetical sequence of vocational development.

1.) During the __Growth Stage__ (from birth to age 14) one's self-concept develops through identification with key figures in family and in school. Subsatges of the Growth Stage are
    a.) __Fantasy__ (ages four to ten), during which needs are dominant. Role-playing in fantasy is important.
    b.) __Interest__ (11-12), in which likes and dislikes are the major determinants of aspirations and activities.
    c.) __Capacity__ (13-14), in which abilities are given more weight. Job requirements (including training and education) are considered.

2.) During the __Exploration Stage__ (about 15 to 24) self-examination, role tryouts, and occupational exploration take place in school, leisure activities, and part-time work. Substages are
    a.) __Tentative__ (15-17), during which needs, interests, capacities, values, and opportunities are all considered. Tentative choices are made and tried out in fantasy, discussion, courses, part-time work, __etc__.

   b.) *Transition* (18-21), in which reality considerations are given more weight as the youth enters the labor market or professional training and attempts to implement a self-concept.
   c.) *Trial* (22-24), in which a seemingly appropriate field having been located, a beginning job in it is found and is tried out as a life work.

3.) During the *Establishment Stage* (25-44), effort is put forth to make a permanent place in the chosen field. Substages are
   a.) *Trial* (25-30), during which the field of work may prove unsatisfactory, resulting in one or two changes before the appropriate field is found--or before it becomes clear that the life work will be a succession of unrelated jobs.
   b.) *Stabilization* (31-44), in which the career pattern becomes clear and effort is put forth to make a secure place in the world of work. For most people, these are the creative years.

4.) During the *Maintenance Stage* (45-64) the main concern is to hold one's place in the world of work. Little new ground is broken but there is continuation along established lines.

5.) During the *Decline Stage* (from 65 on) physical and mental powers decline, work activity changes and eventually ceases. Substages are
   a.) *Deceleration* (65-70), during which the pace of work slackens, duties are shifted, or the nature of the work is changed to suit declining capacities. Many men find part-time jobs to replace their full-time occupations.
   b.) *Retirement* (71 on), in which complete cessation of occupation comes in due course. For some it comes easily and pleasantly, to others with difficulty and disappointment, and to some only with death. As with all the specified age limits, there are great variations from person to person.

Super (154:vii) stresses the point that vocational choice does not occur at one point in time. He uses the term "development" to denote "an ongoing, continuous, generally irreversible process."

Furthermore, vocational development is orderly and patterned (154:42). There are "developmental tasks" each step of the way including identification with the parent of the same sex, the choice of school curriculum, the maintaining of self-sufficiency, and many more.

The process is a dynamic one, marked by a progressive increase and modification of individual behavior. Influences upon this developing process are intelligence, aptitudes, interests, values, attitudes, personal needs, personality traits, and such situational factors as socio-economic status, family atmosphere, religious background, the national and international situation, and social expectancies. Once those influences help mold the individual's self-concept, vocations will be viewed favorably or unfavorably because they are considered appropriate or inappropriate to the self. A young boy may balk at sewing his torn trousers on the grounds that "boys don't sew." A college student from a wealthy family may find that any occupation outside the professions clashes with his self-concept and expected social role.

One of the key influences on self-concept is personal need. Occupations satisfy human needs in three major ways (125:3-12).

1.) Through human relationships. The occupation gives status, independence, and recognition; there are inter-personal satisfactions on the job.

2.) Through work activity. The occupation gives an opportunity for self-expression in an area of personal interest.

3.) Through the earning of a livelihood. The occupation provides wages and security.

Super's writings and research have won general acclaim. His recent volume, The Psychology of Careers (125), was called "a brilliant performance" (201), "a classic" (388), and "an excellent book by one of psychology's finest scholars" (275).

On the other hand, Roeber (388) does not find sufficient emphasis given to the one factor which may "trigger" a career choice. Gustad (275) feels that the early developmental phases of vocational interest are neglected as are the special problems of individuals at the lower socio-economic levels. Brayfield (201) finds Super's concept definitions somewhat vague but, on the whole, hails the work as "discerning" and "distinguished."

Super (154:89) concludes by describing his vocational theory as "exploratory" rather than "systematic." The next step, he feels, is the formulation of working principles (such as those listed below) which may give rise to testable hypotheses.

1.) Self-concepts begin to form prior to adolescence, become clearer in adolescence, and are translated into occupational terms in adolescence.

2.) Identification with a parent or parent-substitute is related to the development of adequate roles, their consistent and harmonious interrelationship, and their interpretation in terms of vocational plans and eventualities.

3.) The degree of satisfaction the individual attains from his work is related to the degree to which he has been able to implement his self-concept in his work.

At the present time, Super is engaged in a research project which he hopes will shed further light upon vocational development. Called the "Career Pattern Study," it involves longitudinal research with a large sample of school-age boys and is sponsored by the Horace Mann-Lincoln Institute of School Experimentation (126; 154; 431). Present plans call for completion of the project by 1975.

STUDIES OF VOCATIONAL INTERESTS

Although hundreds of investigators have done research in the area of vocational interests, doubt has been expressed as to the value of this work. Super (154) finds the results contradictory and feels they cannot be synthesized into a coherent body of information. Everett (501:3) notes "the incredible and startling inadequacy and shallowness of the literature treating this vital and catholic subject."

__Types__ __of__ __interest__. To help clarify the situation, Super (125:218-219) suggests that researchers specify which type of interest they are reporting. "Expressed interests" are specific preferences; a boy may say he is interested in stamp-collecting, engineering, or mowing lawns. "Manifest interests" are expressed in action rather than words. A girl joins the glee club, attends concerts, buys records, and thus manifests an interest in music. "Inventoried interests" are estimates based on responses to a large number of questions. This is the technique utilized by the Strong Vocational Interest Blank and the Kuder Preference Record, both of which compare the student's responses to those of successful people in various occupational fields. "Tested interests" are similar to "manifest interests" but controlled conditions are used; students can be observed while they read occupational literature to see with which pamphlets they spend the most time.

Most of the research has utilized "expressed interests" or "inventoried interests." In the review of pertinent literature which follows this discussion, the name of the interest inventory will be given whenever a report is cited using "inventoried interests." Some studies employ "manifest interests" but no research is available using "tested interests" (125:219).

There are studies which have combined two or more types of interest. Arms (493) gave the Temple University Vocational Inventory to 200 college women and noted seven basic interest factors which emerged. She related these factors to occupational preferences (*i.e.*, "expressed interests").

Educational interests. In reviewing the literature, the author has placed primary emphasis upon vocational interests. Not only do most of the questionnaire items in the current study deal with vocations (thus making past vocational research of key importance), but educational interests have not been investigated to the extent that have occupational interests (522:44).

Therefore, the available studies on educational interests have been integrated with the review of vocational literature. The section on "Vocational Interests and Sex," for example, contains a description of the differences between boys and girls regarding school attitude and academic achievement.

__Factors related to interest__. We have already defined interest as a disposition which impels an individual to seek out particular activities, objects, and goals for persistent attention (522:7). This "disposition," according to Mulslander (293), is "a complex of dynamic forces within the developing personality." It has its origin in "inherited reaction patterns which become individuated through cognitive and satisfying experiences."

Beilin (186) finds two types of variables affecting the development of vocational interest patterns. One is internal (hereditary or biological) which includes the individual's intellectual, physical, endocrinal, and neural make-up. The other is external (environmental or social); this includes one's socio-economic surroundings and one's learning experiences at home and at school, at work and at play.

Beilin feels that these variables can be studied in an "atomistic" manner (in which the variables are related to the vocational decisions made) or by a "gestalt" method (in which the individual's entire phenomenological field is taken into account). Most studies have taken an "atomistic" approach, emphasizing "choice points" rather than continuous development in a social milieu.

Pioneer studies. In 1895* Taylor (164) asked 2000 boys and girls in New York what they intended to do upon completing school. Her combined data for ages seven through 14 indicated that "teacher," "milliner," "dressmaker," and "clerk" were the most popular choices for girls. Boys selected "merchant," "farmer," and various trades and professions.

Monroe's 1898 study (355) was another pioneering attempt. Questioning 1775 boys and girls, his results were similar to Taylor's. Forty-three per cent of his girls chose teaching; Monroe predicted that "the teaching business will be more largely in the hands of women than it is today."

Investigation of children's interests was at its peak in the 1920's and 1930's (522:11). It was then that Witty and Lehman began the studies which led Everett (501:7) to designate them "the most assiduous workers in the field of occupational research." This research was summarized by Witty (142:21-54) in 1949.

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*The dates cited in this review are always the dates of publication; in most cases the research was completed at least a year earlier.

Fryer (40), in his 1931 volume, made a complete review of all vocational studies up to that time. Everett (501) has thoroughly covered the period from 1932 to 1945.

The review of pertinent literature that follows, therefore, will cover studies published from 1946 through 1960. Earlier research of significance will also be mentioned but the main emphasis will be on work done in the past 15 years.

Because the studies are listed topically, those that include several variables will be referred to more than once. Some of the divisions are arbitrary; there is no clear-cut distinction between "intelligence" and "aptitude" investigations, between those involving "family background" and "socio-economic status." However, the division serves as an expedient framework upon which to fasten the data. It also serves to remind us of the many influences there are on an individual's vocational choice.

I. VOCATIONAL INTERESTS AND AGE

There is a logical relationship between vocational development and chronological age. No one facet of the individual grows alone; the entire person develops (161:257). As the individual matures, he not only learns more about the world of work, but about his own strivings and cravings, about the job he thinks will satisfy these needs. Physical and intellectual maturation lead to the emergence of new and more complex abilities which can find their expression in play, study, and work.

A number of general trends are revealed by a glance at the research data. There is a greater interest in vocational plans as one grows older (72:37; 136:481). There is also an increase in vocational realism with age, although studies differ as to its extent (186; 355). There is an overall increase in the number of boys and girls making an occupational choice with age (161:257; 363), although vast numbers are still undecided in their senior year of high school or college (461).

Another trend reported frequently in occupational research is the relatively small number of vocations chosen by students (92; 522:78). Although the American culture offers thousands of different job possibilities, elementary school students rarely list more than a few dozen (92; 323). The number does not seem to rise in high school and actually decreases in college (92; 466).

Several representative studies will be examined at each educational level to present a more complete picture of vocational development.

The primary grades (_grades one_, _two_, _and three_). Children's knowledge about vocations in the early years is quite limited (321). However, many boys and girls enter school with occupational preferences and by the time they reach the third or fourth grade have already developed definite attitudes toward several jobs (321).

GENERAL FINDINGS: Ginzberg (267) states that children of this age are in a "fantasy" period, making imaginary attempts to play adult occupational roles. Hurlock (63:469) cites identification with an admired adult figure as an important influence on the child's occupational development. Cultural patterns are mentioned by Overstreet (490:305) as affecting the child who is told that boys grow up to be "breadwinners" and girls to be "wives and mothers."

SPECIFIC DATA: In 1929 Lehman and Witty (323) reported that the largest number of occupations chosen in their surveys occurred at age eight. Small (405) was surprised to find that over one half of his sample chose a career in the artistic fields before entering school or in the early grades. Small's study, reported in 1952, included both girls and boys.

Jersild and Tasch (72:21) found, in 1949, that most children enjoyed school in the primary grades but that antagonism developed as they grew older.

The middle grades (grades four, five, and six). Hurlock (63:469) feels that during these years the child's concepts of the future are "vague, poorly-defined, and fanciful." A number of provocative studies lend support to this assumption.

GENERAL FINDINGS: Roe (107:254) finds that "without exception" more students in all studies name professional-technical occupations than are proportionately engaged in these occupations at the time. This tendency holds for both sexes and persists into high school and college.

SPECIFIC DATA: In the 1930's and 1940's the most popular career for middle grade boys was "aviator" (92; 321; 501:82). This superseded "cowboy" in the 1920's (323) and has, in turn, been overshadowed in the 1950's by "engineer," "doctor," "scientist," and "baseball player" (518; 522:78).

"Teacher" has been the favorite of girls in the middle grades throughout the century (164; 355; 522:78). The once popular "movie actress" preference (323) has given way to such careers as "model" and "air stewardess" (518; 522:78). "Nurse" and "secretary" are even more popular than the "glamour" occupations while "housewife" is mentioned more at this age than later in the school years (518; 522:78).

Concern with the future is noted even in this period of life. Bennett (9:244) reports that 40 per cent of fourth, fifth, and sixth graders, when administered the Science Research Associates Youth Inventory, state, "I'd like to know what I'm going to be when I grow up."

Junior high school (grades seven, eight, and nine). This is the age during which decisions are frequently demanded; before selecting an academic curriculum, the student must have some notion as to his post-high school activities.

GENERAL FINDINGS: Jersild and Tasch (72:74) find that "at the junior high school level . . . there frequently appears to be a discrepancy between the child's own goals and his interpretation or understanding of the goals of the school. . . ." Thus the school is often overlooked when it could become an ally in solving educational and vocational problems.

Junior high school students continue the tendency began in earlier grades. They aim "too high" in their occupational choices and give little thought as to personal fitness or available openings (255; 335).

SPECIFIC DATA: Various studies reveal from 50 to 75 per cent of junior high school boys choosing the professions (240; 255). The most recent of Witty's studies (522:78) shows "engineer," "lawyer," "scientist," "aviator," and "doctor" to be the most popular choices of seventh and eighth grade boys. The same study indicates that ninth graders prefer "engineer," "sailor," "scientist," "architect," and "baseball player," in that order.

Junior high school girls, in the Witty study (522:78), chose "teacher," "secretary," "nurse," airline hostess," and "model." This is similar to the list of choices by secondary grade girls except that "housewife" no longer is frequently mentioned.

Anderson and Dipboye's study (237) of ninth graders in 1959 disclosed that one half listed no vocational choice. Of those who have expressed preferences, in this and other studies, it is felt that many will change their minds; vocational interests are notoriously unstable in this period of development (63:469).

Senior high school (grades ten, eleven, and twelve). This age, preceding entry into college, a job, or the armed forces, is a crucial one for the student. Hurlock, Roe, and Threlkeld (63:469; 107:259; 158) point out that the ages of 18 and 19 represent a "peak" in the number of students who make vocational decisions. Nevertheless, a large percentage of high school seniors are still undecided regarding their choice of career (490:308).

GENERAL FINDINGS: A survey of several studies at this level led Everett (501:26-27) to conclude that most young people constrain their vocational choices to comparatively few occupations. Once again, the professions far outdistance clerical and trade vocations.

In comparing the choices of junior high school and senior high school students, investigators have found few major differences (379; 465).

SPECIFIC DATA: In 1959 Anderson and Dipboye (237) reported about 40 per cent of the high school seniors in their study to be vocationally undecided. The 1958 Institute of Student Opinion poll (67) found 32 per cent of the boys in its sample undecided as well as 24 per cent of high school girls. Carter and Jones (211) found many undecided students in their tenth grade survey and reported that they were typically younger and "less mature" than those who stated a choice.

Menger's 1932 data (92) disclosed "engineer" to be the most popular choice of both junior and senior high school boys; "businessman," however, does not emerge as a popular choice until senior high school. Engineering was also given top preference by senior high school boys in 1931 (465), 1941 (466), 1954 (375), and 1958 (67). Porter (375) noticed, in a 1954 study, that the professions ranked highest in choices of twelfth grade boys, with business, clerical, and skilled occupations following in that order.

Witty (466), in 1941, found clerical, teaching, and nursing careers to be the most popular selections of girls in this age group.

The Institute of Student Opinion (67), in what it calls "the largest national representative probability sample ever undertaken in the United States," reports the occupational preferences for over 10,000 students. The 1958 study covered grades seven through twelve. This adaptation of the Institute's results shows the most popular choices.

(Boys)		(Girls)	
Engineering	24%	Clerical; civil service	26%
Armed forces	10	Nursing; medicine	17
Science	8	Teaching	16
Business; financial	8	Business; financial	8
Skilled trades	7	Arts; entertainment	6
Medicine	7	Church; social service	4
Farming	6	Science	3
Teaching	4	Armed forces	3
Law	4	Journalism	2
Arts, entertainment	4	Engineering	1
Clerical; civil service	3	Sales; public relations	1
Church; social service	2	Law	1
Sales; public relations	2	Skilled trades	1
Journalism	1	Farming	1
Other occupations	10	Other occupations	10

In 1943 senior high boys were found by Bradley (200) to be less influenced by adventure and excitement in their vocational choices than junior high boys. Edmiston and Starr (245), in a 1948 investigation, found that twelfth graders rated "social approval" as more important in choosing a job than did seventh graders. Singer and Stefflre (398; 400), in 1954, noted that high school senior boys were less concerned with "independence" in an occupation than were working adult males. Salary, interests, and fame were rated higher by senior boys than by adults.

College. Roe (107:259) feels that vocational interest studies would be of more value if they were longitudinal in nature, following a pupil from the first grade through college. Most studies, however, do not attempt this. Therefore, caution must be used in evaluating surveys at the college level as we are usually unacquainted with the earlier interests and background of the students investigated.

GENERAL FINDINGS: As college students are already a highly selected group, very few of them choose the lower level occupations (107:264). Once again there is a tendency for more persons to prefer professions than society supports (402). This cannot be primarily a financial matter as many businessmen make more money than do professional men. Nor is it a matter of security; other fields offer more in terms of pension plans and "fringe" benefits. Roe (107:268) concludes that the emphasis on professions is "related to prestige and status." Studies consistently give the highest prestige ratings to professional occupations (107:268).

SPECIFIC FINDINGS: The popularity of science and engineering is high as young men enter college but declines after the sophomore year (465; 472). Strong (123) finds, at the college level, a greater emergence of interest in socially-oriented occupations while Wright and Scarborough (472) report a similar pattern for artistic interests. The latter study, completed in 1958, also revealed a decline in clerical and computational interests as college proceeded; girls' interests in musical careers dropped somewhat as well.

The range of vocational choices is found to be narrower in college than in grade school or high school by Menger (92). Among college men, "physician" is the most popular career with "engineer," "lawyer," "businessman," "scientist," and "dentist" mentioned frequently. Education, for the first time, is cited by many male students (92). Nearly 90 per cent of the male students chose ten occupations in this 1932 study; 53 per cent of the ninth-graders selected ten preferences.

A number of investigations show that about 60 per cent of the students surveyed have made vocational decisions before reaching college (107:264; 173; 243). However, many of these change their mind (107:265) and many are still undecided as the senior year approaches. In 1934 Strong (123) found one out of four graduating seniors still undecided; an even larger number was discovered by Webb (461) in 1949.

Sperling's 1933 data (153) reveal that college students with vocational goals work harder than those in the "undecided" camp.

Becker and Carper's 1956 study (185) of graduate students disclosed a growing sense of identification with the occupational field. They attributed this to acquisition of professional ideology, the internalization of professional motives, new professional interests and skills, social contacts with people in the occupation, and sponsorship by their college department. In 1948 Hall (276) traced the stages of a medical career and found the events of admission to a medical school and the appointment to an internship to be of crucial psychological importance.

Threlkeld's data (158) indicates that doctors and lawyers made their decisions to attend college at the beginning of high school while businessmen delayed their decisions longer than any other college group.

Post-high school and post-college. One value of post-school studies is the determination of the percentages of people who actually enter the field of their choice. Studies have also been made to record the date of entry into various occupational fields.

GENERAL FINDINGS: Overstreet (70:304) traces the major decisions that lead a student into his vocation: whether to attend college, what curriculum to take, "to study or to loaf," to get a job or seek further training, what kind of job or training to select. Girls must also consider the alternative of marriage. Hurlock (63:972) ascertains vocational stability to appear about the age of 25.

SPECIFIC DATA: Dyer (243), in 1932, followed up a group of college men he had originally interviewed ten years earlier. He found that of those making their vocational decisions before high school, 90 per cent remained in that field. Seventy-five per cent of those who chose their vocations in high school and 68 per cent of those who selected them in college had realized their goal. Norton's findings (363) are similar in nature; the earlier the choice is made, the more stable it seems to be.

Strong (122) followed up a group 18 years after college and published the results in 1955. Utilizing the Strong Vocational Interest Blank (SVIB),he found that those men having the interests of lawyers, ministers, and engineers while in college were the ones most likely to have those interests 18 years later (122:66).

Several studies of manual workers indicate a tendency to "drift" into their jobs and take the first available opening that meets their minimum standards (107:267; 362). In 1953 Norton (363) reported that factory workers showed typically late emergence of vocational interests as compared with college graduates. Although manual workers usually decide on an occupation after professional workers do, they enter full-time work earlier (24:171; 363; 480).

Fixation of vocational interest. Occupational selection can be best understood if we remember that it is not a single event. It is, as Everett (501:3) states, "a series of cumulative decisions" in which the final choice "is nothing but the end result of prior behavior. . . ."

GENERAL FINDINGS: Alfred Adler (2:12) describes the choosing of a vocation as the result of subtle influences which begin to develop in early childhood.

> Suddenly there may come an inciting moment, some experiences so fully in accord with these deeply planted neural patterns that an occupational concept in terms of his own interests and desires takes sudden and clearer form in a youth's consciousness. "That," he will say later, referring to the experience, "was the reason why I decided to enter the vocation."

Strong (122:139) finds that interests of all types become stable if experiences with them give positive reinforcement. Ginzberg (46) and Super (154) have used developmental concepts to describe the process by which vocational interest "fixates" upon specific job possibilities.

The fixation of vocational interest seems to result both from general developmental patterns and from the environmental forces which compel an individual to make certain decisions about his occupational future (63:469; 70:304; 508).

SPECIFIC DATA: Vocational interests are usually not well defined before the ages of 15 or 16, according to Cole (19:616) and Fagin (249). Mackaye (341) lists 14 as the age of "normal fixation" and Hurlock (63:16) says that more vocational decisions are made at 18 than any other year. Warren (459) finds that girls' vocational interests stabilized by the time they reached college age. Sparling's study of college men (153) specifies 17 as the modal age for vocational choices and 16 as the median year. Sparling concludes that

> No proper age for making a vocational choice can be established for a group of individuals. Choice is not at all dependent on age, but on the maturity of the individual and the knowledge which he has acquired with which to formulate a decision.

Threlkeld (158) asked 2800 men, in 1935, when they decided to go to college. Five per cent had decided in seventh or eighth grade, 22 per cent in ninth or tenth, 13 per cent in eleventh, and 44 per cent in twelfth. Smaller numbers had decided in elementary school or after graduation from high school.

Constancy of Vocational Interest. In 1912 E. L. Thorndike (441) proclaimed, "It would be hard to find any feature of a human being which was a much more permanent fact of his nature than his relative degrees of interest in different lines of thought and action." More recent writers, however, have found the opposite to be true. Lehman and Witty (322) write that " . . . perhaps no other phase of human nature is subject to such marked change as that reflected in the vocational interests and preferences of growing boys."

GENERAL FINDINGS: Hulslander (293) summarizes several studies by stating that occupational interest is not constant for most children before the age of 15.

Fryer (48:143-144) made a similar review of occupational literature and discovered that the vocational interests of only half the children studied were stable over a 12 month period. About one in four was stable for four years or more.

DiMichael (234) points out that a change in interest patterns is to be expected from the child or the immature adult. But as the individual matures, "interest patterns in general correlate fairly high over a period of years. . . ."

SPECIFIC DATA: Lehman and Witty (323) administered a vocational interest survey to 6500 boys and girls in the 1920's. Lack of constancy was discovered when the survey was readministered. Much of this fluctuation was due to maturation and the development of new interests. "Cowboy" declined from 38 per cent of the group when the boys were eight to nothing at age 16; "typist" claimed five per cent of eight-year-old girls and 32 per cent of the 16-year olds.

Of Terman's "gifted" group (156), the scientists tended to be most constant in their vocational interests from an early age.

Overstreet (490:318) feels that standardized vocational interest tests do not produce relatively stable results until mid-adolescence. Cole (19:616) finds "an adequate stability after the junior year in high school, but not before." Shoemaker's 1959 research (395) demonstrates the inadvisability of using the Kuder Preference Record for ninth graders because of the instability of their vocational interests. Schmidt and Rothney (392) found, in 1955, that one half their high school sample changed its occupational preference between the sophomore and senior years. They conclude that "variability, rather than consistency, of vocational choice is the rule for the majority of high school youth." Crathorne (225) and Fryer (41:156) report similar percentages.

On the other hand, there is more interest permanence than chance alone would account for. Levine and Wallen (329) found a significant positive relationship between high school Kuder scores and post-school jobs in an eight-year follow-up concluded in 1954. Mallison and Crumrine (342) noted that the highest and lowest inventoried vocational interests changed the least in a 1952 follow-up study of a high school group.

Dressel (241) encourages college administrators to allow for substantial program changes by students as more basic interests emerge into expression. Kitson and Kirtley (312) studied 1000 eminent women (all named in Who's Who); 11 per cent had made at least one "drastic" vocational change. In a 1960 study Hoppock (290) discovered that the greatest increases in satisfaction were achieved by those who changed jobs.

Strong (123:259) finds that one-third of the change in interest patterns on the SVIB typically occurs between 15 and one-half and 16 and one-half. Another third occurs between 16 and one-half and 18 and one-half. The final third occurs by the age of 25. In "the most comprehensive study of age differences in vocational interests," Strong (121) reports that older men have as many likes and dislikes as younger men. The pattern is different, the older men seeking less enjoyment in strenuous or dangerous activity. Interests associated with education, psychology, and the clergy increase with age while engineering and sales interests decrease.

Kuhlen and Johnson (317) note "vocational restlessness" in many 40-year-old men; Super (429) describes this as the stage when "work loses some of its attractiveness and other types of satisfactions have not yet been developed."

Darley and Hagenah (23:7) as well as Super (429) report that many men change their jobs but few change their occupational level. Strong (425) reports that specific inventoried interests are surprisingly stable between 25 and 55; patterns of interests are stable before and after that time.

Strong (122:197) has a "hunch" that there is more constancy than tests measure. He recently wrote that occupational interests are well-developed by the time the boy enters high school but present-day interest tests are not sophisticated enough to measure them and adolescents cannot interpret the vocational significance of these interests.

Age and productivity. The factor of chronological age not only influences the development of occupational preference. It bears upon vocational interest during all of an individual's working years and seems to affect his efficiency, output, and creativeness.

GENERAL FINDINGS: Super (125:56) has given each occupation a "life-span" to denote the time of entry and leaving. Truck-driving, for example, has an "early-entry, early-leaving" life span. Banking has a "normal-entry, late-leaving" span; politics is typically "late-entry, late-leaving." He finds that there is a trend towards later entry into the world of work--and earlier retirement from it (125:54).

Super (125:71) uses the term "career pattern" to refer to the sequence of jobs in the life of an individual. He feels that age and job satisfaction are significantly but not linearly correlated (429). Strong (423) finds a curvilinear, not a linear, relationship between age and productivity.

SPECIFIC DATA: Super (125:66-68) reports that physical chemists tend to produce their great discoveries at an early age. Creativity is seen to come earlier in the physical than in the biological and social sciences. Roe (107:280) cautions that the extent of individual variation is so great that averages are hazardous but finds that high ability is associated with later incidence and lower rates of productivity decline.

The extensive research of Harvey Lehman (320) in this field shows an age decrement in outstanding creativity after a peak in relatively early years. Chemists make their outstanding contributions by the age of 30; mathematics is also "a young man's game." In surveying Lehman's data, Roe (107: 278-279) ascertains that poets and athletes reach their peaks earliest; ambassadors, congressmen, and popes latest. Super (125:68) concludes

> Creative thinkers tend to start producing early in their careers, and to continue producing at a slowly declining rate. Reasons for these trends . . . are partly physical, partly situational.

II. VOCATIONAL INTERESTS AND SEX

There is probably no greater determinant of vocational future than whether a child is born male or female. Western culture assigns the role of homemaker to the woman, the role of provider to the man. In addition, there are specific vocations which few American men would think of entering and many, although a smaller number than a century ago, forbidden to women.

Sexual identification. The prime determinant of behavior, Hurlock (63:394) states, is the idea an individual has about himself. The first major component of the self-concept is the child's sex. Once an identification with "maleness" or "femaleness" is made, much of the child's future behavior is already determined.

GENERAL FINDINGS: Watson (136:441) states that there are hereditary and constitutional factors which make for overall sex differences in strength, stature, and speed. But most other differences noticeable in a given culture are largely dictated by the goals of socialization in that culture.

Roe (107:58) also believes that the social aspects of sex differences are more important than the physical ones. Although there has been no physical change in women for the past century, many more of them are working in a greater variety of jobs. What has changed is the attitude of society towards employing women. With machines doing most of the work formerly undertaken with sheer "muscle" and "brute strength," Roe (107:59) feels that physical sex differences are declining even more rapidly in their vocational significance. The fact that women live longer than men should, says Roe (107:59), balance off the time loss accountable to pregnancy and menstruation.

The effects of socialization are described by Dingwall (28:12) who maintains that the American child grows up in a pattern more "fixed" and "firmly implanted" than in any other country. Prettiness and poise are favored in girls, aggressiveness and mastery in boys. Hurlock (63:392) adds that the roles of "regular boy" and "little lady" bring about social approval and are learned earlier by lower socio-economic class children than by those in the middle and upper strata. Baldwin (6:235) cites the sex role as the role first defined for the growing child--and the one first understood by him.

In the pre-school years identification with the parent of the child's sex occurs to a greater or lesser degree (63:392). In addition, certain parental activities are identified with given social roles (63:394). Gesell and Ilg (44:233-235) describe how these social role differences become more pronounced during the elementary school years. Play groups split along sex lines about the age of four (44:233). Girls show more preference for the masculine role and boys' games than boys show for the feminine role and girls' games (63:467; 136:445). Thus at an early age girls show less reluctance to enter into boys' activities--a proclivity reflected as women attempt to enter traditionally "male" occupations. On the other hand, males rarely take "feminine" jobs (91:279).

SPECIFIC DATA: Various "masculinity-femininity" interest scales and inventories have been widely used. Roe (167:58) states that psychological and social sex differences are of more significance in respect to occupations than are primary and secondary sex differences.

> Sex differences in attitudes, interests, even in intellectual patterning are of considerable importance for occupational psychology. . . . In studies of masculinity-femininity, such differences form a continuum, and the actual physical fact of maleness or femaleness is not necessarily an indication of location at the masculine or feminine end of the scale.

Tyler (449), in 1951, investigated the sex roles of 115 first-graders. Using an orally-administered inventory to elicit expressed interests, she studied outdoor play, indoor play, paper-pencil-crayon activity, and helping adults with work. A mental ability test and a personality measure consisting of peer ratings were also utilized.

Two major dimensions evolved from the personality measure following factor analysis. One of these included the active, noisy, domineering, aggressive cluster of traits; the other included traits of proper appearance and neatness. These dimensions were basically a scale of masculinity-femininity as defined by young children.

The three play interests were independent for both sexes but were negatively correlated with helping adults with work. The latter interest was looked upon as definitely "feminine" in nature. The correlations between personality as measured by peer ratings and interests were all insignificant except that the quieter girls were more interested in helping adults.

There were significant correlations between interest scores and mental ability for boys but not for girls. Darley and Hagenah (23:171-172) explain this in terms of role theory.

> . . . boys are beginning to define roles according to the differentiated positions they may look forward to occupying in adult life, whereas for the girl who sees her future in terms of her mother's daily tasks, differentiation on the basis of special abilities would be less important.

Tyler feels that the entire study suggests that sex differences are perceived before socio-economic differences or other influences affect the child's picture of himself and his role.

Brown (203), in 1957, gave 600 boys and girls a masculinity-femininity interest inventory. He discovered that girls of all ages were significantly more variable than boys. The latter showed a distinct male-role preference all through elementary school. Kindergarten girls displayed an equal sex preference; girls in the first through fourth grades showed a greater preference for the male sex role which gave way to a feminine preference beginning in the fifth grade.

Rosen (391) administered the Minnesota Multiphasic Personality Inventory to a group of college students in 1956. He found that many female students had high "masculinity" scores but that these did not correlate with personality conflict. On the other hand, the more "feminine" interests the male students showed, the more personality conflict was usually indicated. These and other studies indicate that the American culture is more sympathetic to girls who demonstrate "masculine" interests than it is to males showing "feminine" interests (91:227-279).

The classic studies in sexual identification and occupations were carried out in the 1930's by L. M. Terman (128). He felt that the American culture encouraged as typical "male" interests the pursuit of adventure, exploitation, invention, money, machinery, science, outdoor activities, and physically strenuous occupations. "Female" interests clustered around domestic, esthetic, service, sedentary, and indoor tasks. Administering an interest inventory to large numbers of adults, he found a score of 48 to be the mean for American men at the age of 30. Ranged on either side of the mean were such occupations as the following (128:159):

(Males, "masculinity" ratings)	
Engineers	81
Architects	81
Lawyers	62
Salesmen	58
Bankers	56
Doctors	47
Dentists	47
Mechanics	45
Teachers	44
Clerical workers	43
Pharmacists	42
Contractors	36
Farmers	33
Policemen	28
Journalists	27
Clergymen	13
Artists	8

Women were also studied by Terman (128:160) but less deviation from the female mean was discovered. Domestic workers were rated as most "feminine" with a score of minus 101. Women artists rated minus 83, housewives minus 82, business workers minus 81, professional workers minus 75. This is a range of about 25; the male range is three times as great.

Gunderson (505), in 1953, discovered typical masculinity-femininity scores for certain occupations. For example, male counselors tended to score less "masculine" than the male average while female counselors scored less "feminine" than the female mean. Strong's masculinity-femininity scale (123) has also been widely used. There are many similarities to Terman's findings, but some important differences, especially in the case of architects, farmers, and lawyers.

Aptitude differences. Margaret Mead (91:283) reports that in the American culture each sex has its "special superiorities." Some of this diversity is due to physiology, some due to social learning. These differences are demonstrated both in the world of work and in students' school performance.

GENERAL FINDINGS: Men, predicts Mead (91:283), may "always have the razor-edge of extra gift" in the physical sciences, mathematics, and instrumental music. Women "have a special superiority in those human sciences which involve . . . intuition" but, Mead (91:128) continues, have played almost no creative part in the fields of mathematics and music.

It is unfortunate that the American culture regards the artist as "womanish" because many American males have talents in music, painting, and poetry which go unfulfilled (91:227). Mead (91:283) urges that society cultivate the "freedom to use untapped gifts of each sex."

SPECIFIC DATA: Typer (449) feels that frequently reported sex differences in mathematics have originated long before arithmetic is studied in school. Witty (522:46) reports that girls often achieve greater success in reading as well as demonstrating more favorable attitudes towards the skill. Olson (101:155) states that boys tend to show superiority in arithmetic during the elementary school years while girls are, on the average, better in reading comprehension, vocabulary, and basic language skills.

In 1959 Clark (218) reported the academic achievement records of nearly 70,000 elementary school students in 48 states. The superior achievement of girls in the mechanics of English and in spelling indicated "that significant sex differences do exist in the language area." Analysis of standardized achievement test scores showed differences to be most pronounced at grade eight but practically non-existent at grade three. Boys received slightly higher marks in arithmetic reasoning, as did girls in reading, but neither proved to be statistically significant.

Girls continue to receive better marks in English (as well as the arts) at the college level (327).

In 1944 Carter (148) revealed that girls tend to have more interest in occupations involving language and contacts with people; boys are more interested in science. Cass and Tiedeman (212) reported in 1960 that high school students are influenced to choose curriculum by their sex, their college plans, and by their vocational plans. Of these, sex is the most important variable.

In 1959 Stinson and Morrison (419) described their high school study in which girls received better marks than boys. However, the boys were slightly better in intelligence and aptitude tests, demonstrating the importance of sex membership. The 1958 Institute of Student Opinion (67) asked if good marks affected a student's popularity. Over 90 per cent of those polled replied that marks had no effect or a favorable effect. Of the remainder, three times as many boys as girls thought the effect of good marks was unfavorable.

Although Clark (218) found no sex difference in general intelligence, Wechsler (137:150) discovered female superiority on the vocabulary sub-test of his adult intelligence scale. Women also did better in word similarities and a matching speed test. Men excelled in picture completion, arithmetic, and general information. Wechsler (137-148) concludes that "our findings do confirm what poets and novelists have often asserted . . ., that men not only behave but 'think' differently from women."

Sex differences from school to work. The individual variability of Americans is great enough to preclude any unanimity regarding vocational behavior for one sex or the other. Nevertheless, studies have pointed up some general modes of response characteristic of males and females.

GENERAL FINDINGS: Warnath (458) reviews several investigations and finds that jobs offering power, profit, and independence are significantly selected by boys. Girls characteristically select jobs involving social service and

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promising interesting experiences.

Ginzberg (46;252) states that the range of vocational choice is much more limited in the case of girls. He also feels that vocational development for girls and boys is "substantially the same" until girls are on the threshold of college then, for most, "everything falls into a subsidiary position to that of marriage" (46:175). Roe (386) and O'Hara (515) disagree and state that differences between the sexes in vocational development start at an early age.

SPECIFIC DATA: Studies have been cited previously listing the most popular vocational interests of school children. Boys typically name engineering, science, aviation, medicine, baseball (in their earlier years), and business (in their later years) (389; 518). The favorites in almost all the surveys of girls are "teacher," "nurse," and "secretary" (389; 518).

Shoemaker (395) found sex differences on the Kuder Preference Record in his 1959 study of nearly 2000 high school students. Boys typically rejected the social service area and girls rejected the scientific area. Both sexes rejected persuasive and musical interests as measured by the inventory. There were no clear-cut acceptance areas for either sex. Science and mathematics were boys' favorite school subjects while girls favored these subjects plus English in a 1960 study by Witty (522:82) of junior high school students.

Ninety per cent of all Wisconsin senior high school

school students were polled by Little (334) in 1957. One half of the girls and one third of the boys planned to get jobs after graduating. Degree-granting colleges were the choice of 34 per cent of the boys and 26 per cent of the girls; non-degree schools were selected by nine per cent of the boys and 21 per cent of the girls. Those not selecting school or work planned to get married or join the armed services. For boys planning to attend college, engineering and business courses were the most popular; for girls, teaching and nursing were popular.

In 1959 men earned 66 per cent of all bachelors' degrees, 67 per cent of all masters' degrees, and 89 per cent of all doctorates (192). Berdie (192) ascertained, in 1960, that a larger proportion of boys than girls remain in college.

Mitchell (352) reported in 1958 that college activity profiles differed greatly for the sexes. Female recreational participation (over a 25-year period) was higher than male participation. Women were also higher in literary, artistic, musical, and dramatic activities; men scored higher in team sports and in joining organizations. Women showed a greater liking for English, language, history, and home planning courses; men were higher in mathematics, physics, chemistry, and economics.

A number of investigations have demonstrated the interest on the part of women in post-college careers (325; 382). Steinmann (414) found, however, that almost every college woman in her study was convinced that men wanted her "to be the traditional homemaker whose entire life is centered around her home and family."

Several studies have concerned themselves with appropriateness and stability of vocational selection. Norton (363) found girls' occupational interests to be more homogeneous and less variable than boys'. Myers (359) reported in 1947 that girls are more realistic in their choice of occupation. Skodak and Crissey (404) agree; their 1942 data show "the interests of girls . . . (to be) consistently more mature than those of boys for the same age." Carter (148) states that the realism of girls' choices are demonstrated in two ways. Their occupational choices are more similar to actual jobs; their choices are more in line with available openings.

In 1946 Kaplan (305) reported girls making vocational choices later than boys, but Norton (363) in 1957 found girls to make their choices earlier. Overstreet (490:308) points out that girls are less often "undecided" than boys in surveys of vocational plans.

The complexity of sex roles in the American culture and the contradictions in some experimental results have led Strong (122:172) and others to call for more extensive research on the problem. Roe (107:87) summarizes our present knowledge.

> . . . men are more interested in scientific activities, mechanics, physical activities, politics, and sales activities than women are. Women show greater interest than men do in people, social and clerical work, teaching, literature, art, and music. That these differences are of importance for vocational choice is obvious.

III. VOCATIONAL INTERESTS AND INTELLIGENCE

Intelligence influences vocational development in several ways. Since it is related to academic success and attainment, it is an important factor in determining how much education a person will be able to complete and which occupations a person will have the best chance to enter (262). Overstreet (490:313) states that many occupations require special abilities in addition to a certain level of general intelligence. The relationship between vocational interests and ability will be discussed in another section; at the moment we are concerned chiefly with general intelligence as measured by standardized tests.

Occupational hierarchy and general intelligence. It has been demonstrated that the average intelligence of members of different occupational groups may be arranged in a hierarchy. Overstreet (490:313) emphasizes the variation around these averages and the overlapping which results. Nevertheless, certain significant differences do appear. A typical study is that of Miner (94). In 1957 he published results of his administration of the Thorndike Vocabulary Test to 1500 workers. Professional workers averaged 14.6, skilled workers

12.0, semi-skilled 10.3, and unskilled 8.8.

Johnson's 1949 analysis (302) included all prominent studies up to that time. He combined the results from investigations of both workers and their children.

(Occupation)	(Adults' IQ)	(Children's IQ)
Professional	120	116
Semi-professional; managerial	113	112
Clerical; skilled trades	108	107
Semi-skilled	104	105
Slightly skilled	96	98
Unskilled	95	96
Farmers	94	95

Scores for specific occupations were reported by Stewart (417) in 1947 and by Simon and Levitt (396) in 1950. Stewart converted into IQ scores the Army General Classification Test data for 81,553 male military personnel. Simon and Levitt used the Wechsler-Bellevue Intelligence Scale to test 1753 workers of both sexes. A comparison can be made of sample results from the two studies if such adaptations are made as equating "law students" on the AGCT study with "lawyers" on the Wechsler-Bellevue study.

(Occupation)	(AGCT IQ)	(W-B IQ)
Accountants	129	128
Engineers	128	133
Doctors	127	132
Teachers	124	126
Lawyers	124	132
Dentists	124	132
Bookkeepers	122	117
Pharmacists	119	128
Clerks	116	116
Salesmen	115	122
Managers	115	120
Artists	114	124
Mechanics	114	115

The frequent disparity between the two IQ scores can be partially explained by the different tests used and the differences between the groups investigated.

The average IQ for teachers in these two studies is much higher than indicated by results from a 1951 Educational Testing Service research project reported by Whyte (141:91-92). Of the 340,000 male college students tested, those in education ranked lowest. Those majoring in engineering, mathematics, and the physical sciences made the highest scores.

In 1956 Canter (205) compared the AGCT listing with social status ranks of the same occupations. A series of very high correlations (averaging about .92) was discovered. This indicates that those occupations ranked "high" in social status are usually those requiring the greatest amount of general intelligence.

Roe (107:71-73) reminds us of the overlap found even in professional occupational groups. Many professional workers have IQ's in the average range; some unskilled workers have superior mental ability. IQ testing, she notes, has been a useful job placement technique, but seems to be of little value for the selection of sales clerks, semi-skilled, and unskilled workers.

__Intelligence and vocational choice__. Intellectual ability, according to Super (428), is about the first influence which comes to mind when we think of factors affecting occupational selection. "In order to be attracted to something, one must have some sort of understanding of it, and in order to have that understanding one must have a certain amount of mental ability."

Several studies have attempted to measure the relationship between intellectual ability and various aspects of the individual's occupational choice.

AGE OF CHOICE. In 1927 Mackaye (341) investigated the vocational interests of school children in California's San Joaquin Valley. He concluded that a "fixation" of vocational interest occurs earlier in students with low intelligence than in those with high intelligence; "the process of exploratory curiosity is brought to a premature end by low mentality."

Ginzberg's review of the literature (46:252) indicated the opposite trend. "Investigators generally find that students with superior intelligence reach a definite occupational choice earlier than the average." This statement of Ginzberg's is confirmed by studies done in 1931 by Witty and Lehman (465), in 1938 by Jones (211), and in 1940 by Obenchain (101).

The most recent piece of research, concluded by Mehta (348) in 1957, was carried out with ninth grade boys. Those who were "vocationally mature" did not possess higher IQs than did "immature" boys.

REALISM OF CHOICE: An investigation of high school pupils was made by Feingold (251) in 1923. He concluded that "the lower an individual stands in mentality, the higher he seems to be in his vocational ambition."

Bradley (200) in 1943 and Dubrow (499) in 1959 found positive relationships between appropriateness of occupational choice and mental ability. Lockwood (335), on the basis of his 1958 data for 500 high school boys and girls, reported that

> . . . an overall trend existed for higher intelligence to produce higher realism. It would appear that the more intelligent student would have more information about himself and the world of work to permit him to make realistic choices of an occupation.

In 1960 Fairweather (502) classified occupational choices as to their "level" and "field." The more intelligent students made more appropriate "level" choices but IQ was not related to more realistic selections of "field." Jones (485:454) reports similar findings and states that the relationship between ability and "level" is higher for boys than for girls.

NATURE OF CHOICE: Outdoor and indoor play activities were found by Tyler (449) to be precursors of vocational interests. Mental ability was related to such play activities as paper-cutting, drawing, and outdoor games for the boys in the sample, but not for the girls. In 1931 Witty and Lehman (465) divided 13,000 boys into three intelligence groupings. They noticed that the brightest group made vocational interest responses similar to those of older boys while the dullest group's attitudes resembled younger boys. Characteristic vocational choices of the dullest group were "cowboy" and "fireman." The dull students also thought that those careers (plus sheriff and policeman) paid the highest wages.

Jersild (71) reports that children with lower intellectual ratings are more likely to choose trades, skilled labor, and clerical work. Bright students in this 1933 survey were more interested in the professions. Moser's 1949 study (358) indicated similar behavior; there was a rank order correlation of .81 between students' IQ and the mean IQ score of those in the preferred occupation. On the other hand, there are large numbers of average or below average students who claim that they intend to enter professional fields--fields which demand superior intellectual ability (471).

Jones (485;455) asked 2500 adolescent boys and girls to state the reasons for their vocational choices. "Benefit to the community" was listed more often by the bright students; the other reasons were similar for all intelligence groups.

In 1956 Hyman (296) found high school students with high mental ability scores to be more interested in scientific and computational careers, as measured by the Kuder Preference Record. Artistic interests were more pronounced in the average than in the high IQ group. When the socio-economic background was taken into account, the high IQ-middle status and high IQ-low status groups demonstrated more social service interest than the high IQ-high status pupils.

Also using the Kuder, Hill and Hogge (390) tested 187 high school boys and girls in 1958. There was a higher correlation between IQ scores and interest scores for boys than for girls in all areas but artistic. Low but significant negative correlations of verbal IQ's with mechanical and outdoor interests, and positive correlations between verbal IQ's and literary interests were found for boys. Boys' nonverbal IQ's correlated with scientific interests.

In 1959 Crowley (226) administered a checklist to 485 high school senior boys. The higher IQ students typically cited "lack of confidence," "lack of time," and "necessity of hard work" as obstacles to their vocational goals. Lower IQ students listed "lack of ability," "poor grades," and "difficulty with examinations" as obstacles. "Ability" was the most frequently cited "help" for bright students; low-IQ students listed "perseverance."

Cole (19:618) reports a relationship between IQ and success in college. Strong (122:129) does not find IQ scores to correlate highly with the SVIB's measure of occupational level. Getzels and Jackson (504) discover little relationship between creative ability and scores on intelligence tests.

The intellectually gifted and the mentally handicapped. Interest in the exceptional child has stimulated research dealing with both extremes of the IQ scale. The gifted are thought of either in terms of high IQ (i.e., above 125, 130, etc.) or as those demonstrating consistently remarkable ability in worthwhile lines of endeavor (144; 492:217). The handicapped are usually defined both in terms of IQ (below 70 or 75) and behavior characteristics which limit their capability of adapting to the environment (65:2).

Statistically, both groups deviate about two standard deviations from the mean IQ of 100. Educationally, both groups are in need of special provisions if they are to fulfill their potential.

THE GIFTED--GENERAL FINDINGS: Leta Hollingworth (59), an early investigator of the gifted and their interests, thought that the versatility of extremely bright children led them into too many fields. "As a consequence they do many things well but nothing perfectly, and they rarely finish a task."

A more exhaustive study was attempted by L. M. Terman (155:375). In his volume on gifted elementary school students, he wrote

> The average gifted boy is looking forward to an occupation which presents about the intellectual difficulties of high school teaching, preaching, or industrial chemistry. The average boy is looking forward to an occupation of the difficulty of chef or landscape gardener.

A third series of investigations was conducted by Paul Witty (492:211) who associated early recognition of gifts and opportunities in school with success as adults. The role of the teacher was also seen to be a crucial factor in the stimulation of gifted children's scientific, artistic, and social talents (492:216-219).

THE GIFTED--SPECIFIC DATA: Terman and his associates launched a longitudinal study of 1500 gifted boys and girls. In 1925 he reported that 48 per cent of the boys and 38 per cent of the girls desired a career in the professions (155: 373-377). Of the girls, 24 per cent were interested in the arts and 23 per cent in personal service occupations. Of the boys, nine per cent specified artistic careers and eight per cent commercial and business occupations. Both groups were elementary school pupils.

Applying the Barr occupational-intelligence scale to his data, Terman (155:377) found that gifted boys chose occupations with a mean of 15.4,gifted girls 13.9. Girls and boys of average ability selected occupations with means of 12.6 and 12.7. In comparison with a control group, the gifted boys were more interested in artistic, professional, and public service careers; they were less interested in mechanics, transportation, and clerical work (438).

In 1930 Terman (157:65, 143, 169) reported the vocational interests of his gifted students as they reached high school and college. There was a significant relationship between inventoried interests (as measured by the SVIB) and IQ scores. In addition, the relationship between inventoried interests and expressed interests was higher than for a control group.

One half of both sexes had decided upon a definite vocation, four out of five falling in the professional group. Of the college students, 95 per cent of the boys and 59 per cent of the girls had held part-time jobs.

In 1942 the vocational success of the 800 boys was reported (438). Less than one per cent were unemployed. Nearly 75 per cent were in professional or semi-professional work, 23 per cent were white-collar workers, two per cent were in the skilled trades.

To the contention of Madden (89) and other early writers who insisted that "genius" and "insanity" went hand in hand, Terman (438) replied with data from his studies. "In the gifted group," he wrote, "success is associated with stability rather than instability, with absence rather than presence of disturbing conflicts. . . ."

A 1946 investigation by Fleege and Malone (255) indicated that 94 per cent of high school boys with IQ's of 115 or above preferred professional careers. In 1958 French (258) gave 681 college students the Kuder Preference Record. Of the upper fourth, 62 per cent had three or more high Kuder scores in comparison with 53 per cent of the lower three fourths.

The Cleveland "major work classes" have been educating children with IQ's above 125 since the 1920's. In 1956 Barbe (181) discovered that 75 per cent of the boys and 36 per cent of the girls had gone into professional occupations. Fifteen per cent of the boys and 61 per cent of the girls were in clerical and sales jobs. Both this follow-up investigation and the Terman study show the advantage of early identification and special attention for bright students.

THE HANDICAPPED--GENERAL FINDINGS: The severely mentally handicapped child can never become self-supporting and will most probably be institutionalized, homebound, or put under custodial care. The mildly and moderately handicapped groups, however, are capable of holding a great many types of jobs (65:110).

Although Strang (119:510) mentions the difficulty in successful vocational placement for them, Hutt and Gibby (65:110-111, 282) list several jobs in which mentally handicapped adults frequently engage. Among these are jobs requiring a mental age of about five years (e.g., dishwashing), seven years (shoe repairing, domestic work), nine years (foundry work, vegetable harvesting), and eleven years (stockkeeping, janitor work). Many hold jobs requiring somewhat more mental ability: skilled factory worker, typist, telephone operator, messenger boy, salesman, clerk, farmer, and butcher.

Hutt and Gibby (65:239-240) feel that vocational success is partially a function of the interest an individual has in his occupation. They recommend a variety of vocational experiences for the mentally handicapped student and the exploration of his interests as a crucial factor in vocational guidance.

THE HANDICAPPED--SPECIFIC DATA: Kirk (486) reports that 70 to 80 per cent of the mentally handicapped who go through training schools adjust well vocationally. A recent study of graduates from special classes revealed that 94 per cent found and kept jobs (65:281).

Kirk (486) summarizes findings from a number of vocational investigations.

1.) Under ordinary circumstances the large majority of boys and girls graduating from special classes will obtain and hold jobs, although they tend to change jobs frequently. Their record of unemployment is slightly higher than the average.

2.) The jobs in which they succeed most frequently tend to cluster in the semi-skilled and unskilled categories.

3.) The mentally handicapped succeed more frequently when they have been specifically assisted through training, placement, and guidance. This is especially critical now that automation will probably reduce the number of semi-skilled and unskilled occupations.

IV: VOCATIONAL INTERESTS AND FAMILY BACKGROUND

A later portion of this chapter will deal with the occupational literature on social and economic variables. The current discussion is concerned with the effects that the father, mother, siblings, and home atmosphere may have upon a child's vocational development.

Roe (107:128) believes a distinction should be made between socio-economic factors and family influences. She warns that research of this sort is extremely difficult but probably "more fruitful than the amassing of assorted test scores."

Home atmosphere. Fryer's conclusion (40:211), after reviewing the occupational literature, was that " . . . interests are primarily of environmental origin." The social, emotional, educational atmosphere of the child's home is usually the earliest environmental influence.

GENERAL FINDINGS: Kaplan (305) believes parents are the "major influence" in guiding and directing the child's vocational thinking. If the parents specify a vocation for the young child, he is likely to accept this suggestion, at least for a period of time. As an example of this situation, Davis (232) cites the immigrant who insists that his children become physicians, lawyers, or teachers. Sparling (153) feels the emphasis upon professions by immigrant parents stems from the fact that these were the highest vocations known to them in their native lands.

Berdie (192; 193) feels that the cultural and educational atmosphere of a home is more important than the family's socio-economic status in determining college proneness.

> A family apparently talks about college and education when the child is still small, and it is this type of conversation and related attitudes that determine in large part what a student does when he matures.
> . . . . .
> A child coming from a home with many books is more likely to plan to attend college than a child with similar abilities coming from a home with similar economic resources but no books. . . . Perhaps the most important thing that

> could be done to insure a qualified student attending college would be to have him born into the proper home.

Witty (492:208) has stressed the importance of the home atmosphere in the development of gifted students. The most successful adults who had been identified as gifted children "were fortunate in having had parents who guided and encouraged but did not exploit them."

SPECIFIC DATA: In 1941 700 high school seniors filled out a questionnaire designed by Peters (372). The following adaptation of the results indicates their responses when asked to cite the most influential factor affecting their vocational choice.

(Most influential factor)	
Parents	21%
Peers	11
Friends in the occupation	11
Relatives	10
Teachers	9
Educational considerations	8
Available openings	7
Vocational guidance	6
Advancement considerations	5
Social prestige	5
Hobbies	5
Advertisements	2

Peters concluded that "home is the greatest single agency for the determination of a vocation. . . ."

Kaplan's 1946 study also isolated parental influence as the major factor in guiding and directing the child's vocational thinking. Relatives proved to be one of many sources for impressions about occupations in a 1960 investigation by Orzack (365).

In 1948 Friend and Hazzard (149) found that adults making high scores on occupational adjustment tests generally came from "closely knit, strongly unified" family backgrounds. Dynes, Clarke, and Dinitz (244), in a 1956 investigation of 350 university students, reported a relationship between vocational aspiration and early experiences in the home. "Unsatisfactory interpersonal relationships in the family of orientation were significantly related to high aspiration levels and satisfactory relationships to lower aspiration levels."

Early determinants of vocational choice have been the focus of extensive research by Roe (107:129; 387). An "accepting" home atmosphere, she reports, produces individuals with intrinsic interests in either "persons" or "things." These interests, therefore, are not substitute satisfactions for unfulfilled childhood needs. "Rejecting" homes, however, often breed a rejection of "persons," an interest in "things," and a need for aggressive outlets.

A number of studies have concerned themselves with home background and specific vocations. Ginzberg (46:14) finds that future ministers are exposed from earliest childhood to religious experiences and institutions; they come from families "in moderate economic circumstances but . . . fully sensitive to considerations of prestige. . . ." Allen's 1955 investigation of ministers (176) uncovered stable patterns of family interaction in childhood to be characteristic of those attaining professional success. Ministers' sons, according to Hughes (62:30), often enter the social sciences where they can be "emmancipated" but still retain "the father's tendency to appraise rather than participate in the life of the community."

The family is the major external influence for teachers, according to Norton's 1953 data (362). In 1952 Norton and Kuhlen (489:444-450) reported that the home and the school play a lesser role in the vocational development of factory workers than for most other groups.

A 1957 investigation by Nachmann (514) demonstrated several differences in the home atmosphere of male students enrolled in law school, dental school, and social work. Social workers more frequently experienced deprivation in their early years and came from homes characterized by strong mothers and weak or absent fathers. Dentists typically came from homes "lacking warmth" and emphasizing authoritative discipline by strong fathers. Lawyers recalled that their early discipline was "reasonable and fair"; there was a strong male adult present in the family, but he was less often the father than in the other professions studied. Aggressive impulses were accepted by the families of lawyers and social workers but not by dentists' families. Dentists were typically rewarded, as children, for developing physical skills; lawyers' families fostered verbal and intellectual skills.

The father. Fagin (249) feels that a young boy's vocational interests generally originate through identification with someone he admires. If this is true, the child's father and his career loom as important variables in vocational development.

GENERAL FINDINGS: Identification with parental ideals, activities, and interests is a characteristic of normal personality growth, according to Granick, Levy, and Dunner (274).

> There are probably few children who do not at one time or another conceive of themselves as eventually following in the occupational footsteps of the parents. Furthermore, it is quite likely that the ambitions, desires, and attitudes of one's father and mother play a significant role directly and indirectly in the choice of vocation which is finally made.

This identification process is hampered, states Moskin (5:14), by the absence of a male figure in many contemporary American homes. "A boy growing up today," continues Moskin, "has little chance to observe his father in strictly masculine pursuits." He either "deserts his boy" because he is too busy earning a living, or "confuses him" because the father does the same household chores as the boy's mother.

There has been a decrease in the percentage of boys going into their father's vocations. Bradley (200) writes that prior to the onset of the industrial age in America, it was customary for at least one son to follow in the footsteps of his father. At the present time, according to Mead (91:198), the expectation that a son will carry on his father's life work is extremely slight. Davidson and Anderson (24:167) agree that occupational inheritance has been greatly reduced in recent decades.

SPECIFIC DATA: As far back as 1895 Taylor (164) commented upon the decrease in boys entering their father's fields. Fifteen per cent of the 475 students questioned planned to choose their fathers' occupations. Taylor felt that the relationship between a father's job and his son's occupational interest was highest in the early years but declined about the age of ten. This is contradicted by Bingham (10) who found, in 1937, more boys choosing their father's career at 14 than any other year.

Nelson (360) and Overstreet (490:324) cite a number of studies which demonstrate that boys choose their fathers' occupations infrequently but more often than can be attributed to chance. This is confirmed in a 1955 investigation by Jenson and Kirchner (301) who interviewed members of 8000 families in six large cities. Bagley (494), in 1956, found that farm youngsters are slightly more influenced by their father's work than non-farm boys.

Friend and Haggard (149) report that workers with high vocational adjustment scores demonstrate more favorable attitudes towards their fathers than those with low scores. No difference was found, however, when occupational achievement was correlated with attitudes towards the father. Dynes, Clark, and Dinitz (244), in 1956, discovered that 42 per cent of "high vocational aspiration" college students felt "unwanted" by their fathers in contrast to 24 per cent of the "low" aspirants.

Lyon's 1959 data (510) reveal that "vocationally undecided" boys are less familiar with their fathers' occupations and less strongly identified with their fathers than are boys in a "decided" group. Fryer (40:169) reports that the father's occupation seems to have little effect upon his daughter's occupational choice.

The mother. A young child, according to Hurlock (63:524-525), thinks of the father as the provider and head of the household while the mother is entrusted with the care of the home and children. Lower-class children view their mother as a person who completes her duties with little help from the father. Middle-and upper-class children see her as sometimes having assistance from the father and from people outside the home.

GENERAL FINDINGS: Alfred Adler (2;12) states that a child's mother is the first influence in the development of his vocational interests. Another psychoanalyst, E. H. Erickson (36), believes that a mother will normally transmit the cultural concept of "the male ideal" to her son, thus aiding his sexual identification. White (462) cites studies indicating this to be true; boys with more "masculine" interests have goals more congruent with their mothers' ideals for them than do boys with more "feminine" interests.

The mother, according to Davis (26:215; 232), is frequently the "driver" who trains youngsters to look favorably upon jobs representing "upward mobility." In regard to college enrollment, Berdie (192) feels that the education of the mother is a more potent variable than the education of the father. "One of the ways for us to obtain more educated men," Berdie writes, "is to have more educated mothers."

SPECIFIC DATA: In 1943 Berdie (191) studied the interests and family backgrounds of 138 male college students. The mother's job, before or after marriage, was not found to be an influential variable in the son's occupational choice. However, antagonism for the mother was found, by Friend and Haggard (149), in 1948, to be positively correlated with low scores in work adjustment and achievement.

Both mothers and fathers were asked, by Hill and Hole (286) in 1958, to answer the Kuder Preference Record as they believed their tenth grade children had answered it. When comparisons were made, estimates by the mothers appeared to be slightly more accurate than fathers' estimates.

White (462), in 1959, tested 81 college freshmen girls. The mother was the parent with whom the girls were more closely identified although the identification was less pronounced for those students expressing strong interests in careers. In addition, more of the "career girls" came from homes where the father was deceased or where family ties were weaker.

Siblings. The influence upon vocational choice by brothers and sisters is mentioned by Hurlock (63:470), Roe (107:129), and Overstreet (490:308). Instead of being a direct influence, such as a younger boy deciding to follow his older brother's career, the effect is more often a subtle, partially unconscious one.

GENERAL FINDINGS: A psychoanalytic interpretation of sibling influence is stated by Brill (15:327). He finds first-borns to be domineering and officious, usually selecting vocations requiring leadership. The "only child" also falls into this category; many of them become religious or political leaders. The youngest sibling, however, is intimidated by his older brothers and sisters; he is generally satisfied with a subordinate occupational position.

Everett (501:71) feels that sibling rivalry is a primary cause of unrealistic vocational ambitions. A young man, for example, may select an inappropriately high vocational goal to establish his superiority over a brother or a sister.

SPECIFIC DATA: Roe's analysis (107:129) of prominent scientists indicates an incidence of first-borns much higher than could be accounted for by chance. She feels that first-born children may have more independence while younger siblings are subject to the frustration of never being able to "keep up." This frustration is aggravated if the child is near the age of his older sibling and of the same sex.

In 1948 Friend and Haggard (149) analyzed the family backgrounds of 80 men and women. Those with the poorest records of work adjustment had the highest degrees of sibling rivalry, parental conflict, and family disorganization in their formative years. However, no relationship was found between work adjustment and ordinal position in the family. Deunk (498) found no occupational significance attached to being an "only child" in a 1953 investigation.

Parental expectations. Darley and Hagenah (23:7) mention the importance of this factor in relation to the child's occupational choice. Hill (285) applies it to education and feels the educational traditions and ambitions of the family are "the most potent determiners of college proneness."

GENERAL FINDINGS: Paul Woodring (145:163) describes the "American dream"--each child must become more successful than his parents. This influence is a greater consideration than learning capacity (145:131) and is the cause of much vocational unrealism. Parental expectation, continues Woodring (145:163), is a key factor behind the lack of male teachers in America.

> The boy whose father is a lawyer, a physician, a business leader, or an engineer frequently feels that it would be a step down for him to become a high school teacher. . . . This prejudice against "stepping down" is so strong among boys from the professional and business classes that the colleges which draw largely from those classes are not likely to produce many male teachers until we find ways of increasing the prestige of the teaching profession.

Gardner (483:883-884) hopes that parents will make realistic evaluations of their children's abilities. Finding many incorrect appraisals, he draws upon his psychoanalytic background to cite the bases of parental unrealism.

1.) The desire that the child should jump to the next higher socio-economic class.
2.) The tendency to thrust upon the child the ambitions that parents once had for themselves.
3.) The need to have their child stand out as a unique individual, even if the child's actual endowments prevent this.
4.) The influence of family tradition. "For generations no Snodgrass has ever gone to any college save Yale, so little Elmer shall go to Yale."

SPECIFIC DATA: In 1933 Sperling (153) cited the three most common reasons given by students who had been "thwarted" in their initial vocational decisions: lack of ability (34 per cent), insufficient funds (28 per cent), and parental disapproval (four per cent).

Centers (479) reported, in 1952, that 80 per cent of professional, business, and white-collar workers, and 50 per cent of manual workers, desire college educations for their children.

The most exhaustive survey of parental expectations in regard to college was carried out by Roper and his associates (109) in 1959. A questionnaire was directed to 5000 parents of pre-college children in all parts of the United States.

Results indicated that parents expect to send 69 per cent of their children under 18 to college. This percentage is about the same for girls as for boys. It is higher in the upper socio-economic levels, in smaller families, and in the far Western states. Many parents are unrealistic in their estimates of college expenses; 60 per cent have no savings plan set up for college costs. Of the parents not planning to send their children to college, 46 per cent list financial reasons. Other statements frequently given are "the child doesn't want to go," "his marks are not good enough," and "we don't want him to attend college."

One out of four parents expect their child to work part-time to help pay expenses; 40 per cent hope for a scholarship. Many parents intend to send their children to state universities, but those selecting private colleges expect costs there to average only $200 more per year than at state schools.

V. VOCATIONAL INTERESTS AND OCCUPATIONAL-EDUCATIONAL EXPERIENCES

Those who adopt the view of Fitson (77:142) that vocational interests are "dynamic" and "largely the result of experience," would expect early vocational and academic exposures to be crucial variables. This is the position taken by Overstreet (490:307-308) who writes that " . . . situations such as work experience and school subjects have been indicated as influential . . . factors."

Influence of summer work, part-time jobs, and the armed forces. Since the end of World War II, purchasing power of high school students has quadrupled. In 1959 it was estimated as approaching ten billion (266). Much of this increase is attributable to the rise in summer and part-time employment. Gilbert (266) states that four and one-half million high school students do odd jobs or part-time work throughout the school year; four million spend their summer vacations working.

GENERAL FINDINGS: DiMichael and Meyersieck (235) list the advantages of part-time employment: the fostering of personal independence and emotional maturity, the stimulation of cooperation and initiative, the teaching of responsibility and need for education. Disadvantages are the possible increase in school tardiness and psychological tensions, the lessening of leisure and study time, and the encouragement of extravagance and poor health habits.

Carroll (209) and Christensen (215) encourage junior and senior high school pupils to find jobs, believing that the experience will teach good work habits, the proper handling of money, and the understanding of people.

On-the-job experience is listed by Owen (357) as "one of the very best bases for occupational counseling." Moore (356) suggests inaugurating "work education" plans as a part of the high school curriculum. The alternating college and work program of Antioch College is looked upon favorably by Strang (120:526).

SPECIFIC DATA: A 1945 survey of 879 ninth graders by DiMichael and Meyersieck (235) indicated that stock work, sales, newspaper delivery, pin-setting, and messenger work were common part-time jobs for boys. Girls engaged in baby-sitting, clerking, and "soda-jerking." The most common use cited for their wages was "spending money" followed by "clothes," "lunch," and "car expenses." A greater proportion of working students' fathers held low-level than high-level jobs.

Gilbert (206) lists clerking, camp counseling, stock work, caddying, sales, kitchen work, and road construction as popular summer jobs. His surveys indicate that a majority of today's high school students engage in summer work; many boys and girls say that they eventually intend to find jobs in these fields.

Stiles (418) reported 80 per cent of college entrants claiming some work experience in a 1951 study; most drew no connection between these jobs and their decisions to enter college.

Work experience was seen to influence vocational choice by Davidson and Anderson (24;169) in 1937 and by Norton (362) in 1953. In another 1953 study, Deunk (498) discovered an association between occupational choice and the best-liked job held during high school. In 1952 Barnett (147) reported a relationship between the SVIB occupational level scale and summer employment, extra-curricular activities, "drive," and definite goals.

Lyon (510) found no relationship between summer jobs and vocational choices of adolescents in 1959. Bateman (183), in 1949, compared the test scores of working and non-working high school boys and girls. Greater agreement was noticed between expressed vocational interests and inventoried vocational interests for the non-working group.

Davidson and Anderson (480) reported, in 1952, that high school students from low occupational level families have a more limited range of occupational experiences than youth from high-level families. There are proportionally more low-level students holding summer jobs in farming and proportionally more high-level students in sales.

Overstreet (490:312) has described the vocational guidance programs established by federal legislation for returning veterans. Ginzberg (46:12) reveals that tenure in the armed forces has little influence on occupational goals. An exception to the general pattern is the unskilled or semi-skilled worker who is usually reluctant to return to a low-level job.

Roe (107:274) notes the "high motivation" of veterans returning to college. She also cites evidence that "working a year or two between high school and college is not inadvisable."

__Influence of teachers, school activities, and the educational aggregate.__ Academic experience is mentioned by

Ginzberg (46:11) as being one of the major variables operating in the process of occupational choice. Jersild (60:295) observes that the school has a great opportunity--to teach the child to understand himself. If this opportunity is lost, realistic vocational selection and appropriate educational planning are two of the casualties.

GENERAL FINDINGS: Watson (460) blames youth's overselection of professional careers upon their early educational training.

> . . . the school has given all pupils the foundation of verbal and arithmetical skills which are widely used in such jobs. There is a similar group of "minimum essentials" for the great variety of mechanical jobs in our machine age, but the schools have not provided for equally wide mastery of this polytechnic base.

Watson urges more emphasis upon crafts, electricity, machinery, and the manual arts to offset the imbalance.

Roe (107:118) agrees that the problem exists. Because the average high school is oriented towards the white collar and professional occupations as ideals, a high school graduate may be frustrated if he turns to manual work, even though it may suit him well. In some cases a high school education may be of little help to vocational adjustment and it could even be a hindrance.

SPECIFIC DATA--THE TEACHER: Hurlock (63:472) reports that most students in the primary grades like their teacher and may often shift affection from the mother to the teacher. Jersild's research (70:289-290) reveals that as children grow more critical there are characteristic personality traits which divide "liked" from "disliked" teachers. The emotional qualities that a teacher brings into his personal relationships with students stand above his academic competence. A frequent comment in regard to the popular teacher is "he likes us." Disliked traits include rigid discipline, sarcasm, surly disposition, and lack of individual attention to pupils.

Carlin (207) reports that 35 per cent of the 507 college students he studied chose majors in the subjects taught by their favorite high school teacher. Mathematics and music showed the clearest positive relationships in this 1960 study.

Witty (492:221-222) mentions the influence the classroom teacher may have upon the stimulation of gifted children. Forrer (315) and Everett (501:70) state that many teachers have encouraged pupils to train for inappropriate occupations. Berdie (193) notes that they frequently influence students to apply for college entrance.

Becker and Carper (185), in a 1956 study of graduate students, found their interpersonal relationships with professors to be important factors in occupational identification.

SPECIFIC DATA--SCHOOL ACTIVITIES: Carlin (207), in 1960, found a close relationship between the chief extracurricular activities of high school students and their college majors in 30 per cent of his sample. The relationship was especially apparent for majors in physical education, music, speech, and journalism.

An abundance of research in this area concerns itself with guidance programs and the occupations courses now offered in many American schools. These courses offer introductory study concerning the world of work, make occupational information available, administer and explain aptitude tests, and arrange meetings with representatives of various vocations (306; 389; 401).

Lowenstein and Hoppock (336) list several differences found to exist between college students who had taken occupations courses in high school and those who had not.

1.) In the group which had taken the high school course, a greater proportion had made a definite vocational choice.

2.) More students based their choice upon interviews with people in the occupational fields. Less based their choice on parents' or relatives' suggestions.

3.) Less time was spent studying, more time was spent in extra-curricular activities. Yet the grade averages were higher for those having taken the occupations course.

Walker (521) studied a group of high school girls in 1955 and discovered that occupational information and related activities "definitely affected" vocational choice. There was a greater certainty regarding the selection and more realistic attitudes towards the occupational world. The positive influence of school counseling programs and guidance personnel has been frequently demonstrated (31:106; 485:455).

Kaye (306) inaugurated a unit on occupations in the fourth grade. In 1960 she reported that "the children became more realistic about their future goals and more respectful of their fathers."

Sinick and Hoppock (401) have reviewed the research since 1953 on occupations courses and related activities. Although they note many shortcomings in the experimental techniques used, the evidence indicates that a growing number of elementary schools, high schools, and colleges are integrating vocational information into the curriculum. Changes in career choice and attitudes have generally resulted when the students were exposed to these courses and activities.

SPECIFIC DATA--THE EDUCATIONAL AGGREGATE: Glazer (268) used the Kuder Preference Record in a 1958 study of 335 veterans. Men who had completed high school were lower in computational and literary interests than men who had been to college. Non-high school graduates demonstrated higher scores in mechanical and artistic interests, and lower scores in persuasive and social service interests, than either of the other groups.

Davidson and Anderson (24:172) report a positive correlation of .60 between occupational level and the years of school completed by workers. Roe (107:117) states that correspondence between amount of education and occupational level is significant but far from perfect. Most professional occupations have quite exact educational and training requirements but business requirements are much less definite. Jobs in the lower manual labor categories do not require education beyond grade school.

Levine (328) has ascertained the differences in the educational aggregate for major occupational groups. His data reflect the median number of school years completed in 1957.

Occupational group)	(School years completed)
White-collar workers	
Professional and technical workers.........	over 16
Clerical and kindred workers...............	12.4
Sales workers..............................	12.4
Managers, officials, proprietors...........	12.4
Blue-collar workers	
Craftsmen, foremen, and kindred workers....	10.5
Operatives and kindred workers.............	9.5
Laborers, except farm and mine.............	8.5
Farm laborers (based on Baer's data)(179)..	8.2

In 1960 the Interdepartmental Committee for Children and Youth (162:32-33) reported that young people with a college education have the widest career choices. Sixty per cent of male college graduates have professional or technical positions and 25 per cent run their own business or hold managerial jobs. Of the female graduates who are full-time workers, 80 per cent hold professional or technical positions. Work in sales or clerical fields, or as operatives or craftsmen, are the most likely openings for high school graduates.

Young people who drop out of school early are likely to settle down as laborers, operatives, or service workers. Unemployment is highest for those with the least schooling (162:33; 166; 179; 272.

At the present time, some jobs demand no knowledge of reading, writing, or arithmetic, requiring only the recognition of numbers or of letters on controls and switches (107: 119). However, Strang (119:510) reports that the most frequently cited reason for failure to get a job is lack of sufficient education. Furthermore, the occupational scene is changing due to automation and the greater demand for highly trained personnel (162:32).

School likes and dislikes. To young children, going to school means "growing up," according to Hurlock (63:472). A teacher may capitalize upon this interest and expose his pupils to new experiences in the world of learning. A variety of writers have attempted to determine how children's interests develop in the classroom--and why so many of them lose their original enthusiasm for school.

GENERAL FINDINGS: Ginzberg (46:226) emphasizes the "internalization of learning" and its importance. Unless a child can see a relationship between his own goals and the purposes of the school, learning will become an unsatisfying activity and he will try to escape from it. "By the time of puberty, with its new sources of pleasure, the child must have internalized the meaning of learning" or he will probably never have another chance.

Carl Rogers (108:388-391) lists four hypotheses which he feels may be of assistance in this "internalization" process.

1.) We cannot teach another person directly; we can only facilitate his learning.

2.) A person learns only those things which he perceives of as maintaining or enhancing the "self."

3.) Experience which, if assimilated, would threaten the organization of "self" tends to be resisted.

4.) The educational situation which most effectively promotes significant learning is one in which the "self" is enhanced, not threatened.

A student who is studying sociology because it is seen as relevant to his professional goals will do better than if he sees it only as a requirement for graduation. And he may do very poorly if the sociological material he is studying threatens some social prejudice with which the "self" has become identified.

The effect of school curriculum upon the gifted student is described by Witty (492:210) and Bish (197). According to Witty, a curriculum which makes little demand for high ability is likely to produce indifference and boredom on the part of bright students. Bish urges teachers to make their goal the intrinsic motivation of the talented or risk producing a "gifted student who dislikes 'all school' because he is plied daily with materials he already knows, processes he already understands, and techniques he can master immediately."

SPECIFIC DATA: The series of research studies done by Arthur Jersild (69; 70; 71; 72) over the past 30 years stands among the richest sources of information regarding students' likes and dislikes. Jersild's data (69; 72) indicate that pre-school children usually look forward eagerly to attending school and learning how to read and write. First and second graders generally like their teachers and enjoy the school curriculum.

This interest in scholarship declines as the child passes from the primary to the middle grades. By the end of elementary school, children often dislike their teacher, the academic program, and the rules and regulations of the school. This development is especially characteristic of boys who frequently rebel against homework assignments and long for the time when they need no longer attend (72).

From the third grade through high school, more children mention school when they describe what they dislike about themselves than when they describe what they like about themselves. At the college level, however, the proportions are nearly equal (70:277).

When asked why they go to school, 47 per cent of the children list practical reasons such as a desire not to be stupid or the necessity of an education. Only 20 per cent mention enjoyment of school. Those students of above average intelligence, however, cite enjoyment of school activities more frequently than do less intelligent children (71:84, 86).

Interest in school subjects also changes as pupils progress through the grades. Children in the early grades show an interest in art, mathematics, and reading, but little in science or geography. Interest in the biological and physical sciences increases as the children reach high school (69; 72).

Extra-curricular activities gain in popularity as boys and girls proceed through school. Recess becomes more popular as do sports, physical education, and games (72).

High school youth express the most dislike of courses and teachers (72). There are many reasons for this development. Adolescents have many interests a school cannot readily satisfy. Adolescents are more critical and have more yearnings for independence. More homework is required of them and their academic shortcomings become more obvious as the difficulty of their courses increases. Too often the school program offers adolescents little that has meaning and value for them; their needs are often ignored by school administrators and planners (70:281-282).

When students were asked what they would like to learn more about, 27 per cent mentioned courses in vocational preparation and self-understanding (72). Jersild (72:87; 70:301) concludes that

> When we take education literally and seek to educe, to draw forth in the most constructive manner, the resources with which children are by nature endowed, we are not simply helping them to have a good time. We are making a fundamental investment in human welfare.
>
> .....
>
> It is in a setting of common work and sharing of feelings and thoughts with others that the richest possibilities for self-examination can be found. In the teaching profession hardly a beginning has been made in exploring the values individuals must find in one another.

Additional studies have investigated students' likes and dislikes, especially concerning academic courses. In an early investigation, Fryer (40:226) asked students to list their favorite subject and the subject in which they did the best. High correlations (.85, .86, .89) were found in the elementary school, high school, and college groups. The correlations were somewhat lower, however, when he checked school records and utilized the grades which students had actually received.

Garrison (42:258-260) states that English and mathematics are both the "best liked" and the "least liked" subjects in high school. Making a number of cross-tabulations in 1951, he found a frequent pattern emerging: "those students disliking English, languages, and history, often offer as their preferences mathematics and the laboratory sciences; and vice versa."

In 1944 Tenenbaum (437) reported 20 per cent of sixth and seventh grade students "distinctly dissatisfied with school" and a majority of both sexes "critical" of school. In 1953 McCreary and Kitch (163) invited critical comments from 13,000 college students. They ranked lowest the preparation they had received in high school for marriage and family living; 46 per cent said they had been given little or no assistance in this area. More vocational guidance and occupational placement were also requested. On the other hand, men listed English and mathematics as the high school subjects which had helped them most in college. Women cited English and business training. Both sexes frequently mentioned typing as a necessity for all college entrants.

VI. VOCATIONAL INTERESTS AND SOCIO-ECONOMIC FACTORS

The importance of economic and social circumstances has been stressed by social scientists in several recent investigations of American life. Lending impetus to this movement were the writings of W. L. Warner (134; 135), David Riesman (105; 106), and others. Popular interest in the subject was demonstrated in 1959 when a book on social status by journalist Vance Packard (103) became a best-seller.

Warner (134) writes that "class levels do exist" in the United States and "that they conform to a particular pattern of organization." He arranges six social classes in a hierarchy from "upper-upper" to "lower-lower." Because the class system is relatively "open," social mobility is a characteristic of American society.

> The principle forms of mobility in this country are through the use of money, education, occupation, talent, skill, philanthropy, sex, and marriage. Although economic mobility is still important, it seems likely that more people move to higher positions by education than by any other route (134).

Havighurst (282) agrees that education "works to make the society more fluid and to increase the amount of vertical mobility." The influence of American education has also been described by Riesman (105) and Overstreet (490:326).

In determining the class membership of a family, sociologists use many measures of social and economic position. Prominent among these measures is the father's occupation. The occupational level, duties, pre-requisites, and rewards are felt to make up the most significant index of socio-economic status (125:91; 281; 298).

Influence on educational attitudes. Parental attitudes toward school vary according to the social class membership of the family (63:473; 519). Davis (26) states that parents from the upper-middle class are great believers in education; those from the lower-middle and upper-lower classes see it as necessary for vocational success. Those from the lower-lower classes often reject school and what it stands for.

SPECIFIC DATA: Twelfth grade boys were studied by Crowley (226) in 1959. Socio-economic status was assigned by using the father's occupation. When asked what their assets were, the upper-level boys listed school, parental support, a good education, opportunities, hard work, study, and ambition. Lower-level boys mentioned work experience, their "good record," prayer, "God's help," unselfishness, hard work, and training in the armed forces (which many expected to enter). Upper-level boys saw "poor grades" and "criticism from superiors" as being their chief obstacles; lower-level boys cited "lack of a good education" and "not being understood by others."

The relationship between the father's occupational level and verbal intelligence was measured by Holden and Isaksen (288) in 1959. Holding educational level constant for a group of 45 adult men and women, they discovered that "socio-economic status . . . is a significant variable in relationship to verbal intelligence. . . ." There was a preponderance of semi-skilled and unskilled paternal occupations among those who scored low on the Thorndike Vocabulary Test. Irwin (300), in 1948, investigated the vocabulary of young children and concluded that "speech development seems to be influenced by the occupational status of the family," especially after the first year and a half of life.

Terman (438) reported in 1948 that the fathers of his very highest gifted group were more often professional workers than the fathers of the lowest quarter of the gifted group. Bond (198) examined the paternal occupations of National Merit Scholarship winners in 1957 and found a larger proportion in high-level occupations than in other fields. The greatest number of fathers in specific professions were librarians, college personnel, architects, lawyers, and clergymen.

Several investigators describe the influence of socio-economic status upon college attendance. In 1947 Davis and Havighurst (26:215-217) found the parental expectations of middle-class youngsters a powerful influence in their plans to attend college. In 1944, Warner, Havighurst, and Loeb (135) established that the percentage of college entrants who actually graduated varied with social class. Lower-class students of similar ability graduated less frequently than upper-class students.

Kahl (304), in 1953, investigated the backgrounds and attitudes of bright high school senior boys from lower-class families. Each student who had decided to attend college was paired with one of similar ability who did not plan to attend. The only distinguishing factor was attitude towards social mobility; those going to college were interested in a better position in society than their parents held.

When 2000 bright high school boys were polled by Berdie (192; 193) in 1953, 90 per cent from high-level and 55 per cent from low-level backgrounds planned to attend college. When the sample was broadened to include various degrees of mental ability, 81 per cent of professional workers' sons planned to attend in comparison with 30 per cent of factory workers' sons.

Little's 1959 survey of Wisconsin youth (334) revealed college plans to be more typical of students with professional and executive fathers than for any other group. However, the extent of parental education was an even greater influence.

Roper (109), in 1959, compared parents in the top economic bracket, where 97 per cent of the children are expected to attend college, to the lowest income bracket, where 44 per cent are expected to attend. When asked if they were "almost certain" that their children would attend college, the percentages declined to 72 per cent and 13 per cent.

GENERAL FINDINGS: Hill (285) notes that "college proneness is enhanced by economic advantage." McClelland (88) describes the circumstances which produce a smaller percentage of lower-level college entrants. Although economic factors play their part, other agents are also at work.

> One of these factors is almost certainly motivation. Some of these students may not want to get ahead, to pursue high-level careers. . . . Another important factor . . . is . . . the value placed by the family group on education and on high-level careers as compared with certain other values, such as making money, supporting and helping the family, and so on.

Influence on vocational selection. One of the most frequently studied variables in relation to vocational choice has been socio-economic status, according to Warnath (458) who concludes that youngsters from different social classes tend to aspire to different types and levels of jobs.

SPECIFIC DATA: The most commonly cited investigation in this field is Hollingshead's 1949 study of "Elmtown's youth" (58). Comparing the vocational aims of high school students in four socio-economic classes, Hollingshead notes significant differences and discovers that the percentage of "undecided" youngsters rises as social class declines.

(Vocational aims)	(Class 2)	(Class 3)	(Class 4)	(Class 5)
Professional; business	77%	36%	23%	7%
Farming	12	11	6	3
Clerical	5	20	20	10
Crafts	3	12	18	14
Service trades; others	0	8	13	25
Undecided	3	13	20	41

Hollingshead (58:285, 287) concludes that

> . . . the adolescents' ideas of desirable jobs are a reflection of their experiences in the class and family complexes.
>
> .....
>
> In short, they are either being forced to accept or they are willing to accept the vocational patterns the class system holds out to them.

Several other writers have delineated socio-economic influences. In 1935 Kroger (316) reported that 70 per cent of the male high school students in his sample selected occupational goals at a higher level than their fathers' vocations. Preference for vocations somewhat higher in the social scale than paternal careers was also detected by Bradley (200) in 1943, by Super and Wright (435), in 1949, and by Youmans (474) and Empey (247) in 1956.

Using family income as an index, Berdie (191), in 1943, came upon only one college student out of 56 interested in engineering whose family earned above $5000 per year. Of 80 not interested in engineering, 20 per cent came from families earning above $5000. The percentages were reversed in the case of business majors in the same group.

Adams (174), in 1954, reported that the highest socio-economic origins are found among leaders in middle-sized businesses, the lowest origins among leaders of large businesses. In 1959 French (259) revealed that teachers generally came from families whose incomes were below the mean for his college group. Lawyers and businessmen came from families above the mean.

Centers (16) collected occupational data for about 650 men and their fathers, classifying them in terms of occupational level. In 1949 he reported that the overall net mobility was small--and that it was greatest at the extremes of the occupational scale. His figures indicate that from 58 to 76 per cent of the sons remain at their fathers' level or shift to the one adjacent to it. Davidson and Anderson (24) give the figures of 60 to 73 per cent for the same relationship. They also report that "occupational inheritance has been greatly reduced in recent decades" (24:167). Writing in 1937, they read from their data a far greater tendency to remain at the father's occupational level than to go into the father's line of work, a situation confirmed by later investigators (154:76; 200). When an occupational shift occurs, it is usually upward with greater mobility near the bottom of the occupational ladder (301; 316).

Fairweather's 1960 data (502) indicate that upper-class students make more appropriate vocational choices than lower-level students when vocations are classed according to occupational level. However, there is no difference between the classes when occupations are classified according to "groups." Hyman (296), in 1946, found no difference between social classes when students' vocational choices were measured by "group," not occupational level.

Grones (271) determined, in 1956, that lower socio-economic students tend to lump all the white-collar and professional occupations together in their vocational thinking. Students from higher socio-economic backgrounds make divisions within the group and react to specific careers on a more individual basis. He also established that lower-class students are more likely to avoid formulating any vocational goal.

In 1958 Lockwood (335) found the rental district which students came from to be a significant variable affecting vocational realism. Those from higher rental areas made more appropriate choices.

In 1956 farmers' sons in the twelfth grade were divided by Straus (421) into two groups: those who gave farming as their preferred occupation and those choosing other lines of work. There were no significant differences in intelligence, nearness to urban areas, or physiology. There was, however, a socio-economic difference; the future farmers came from farms with higher incomes. In addition, they spent more time working on the farm and had more direct contact with farm life.

Deunk (498) surveyed 2406 high school senior boys in 1958. He reported that those from lower socio-economic backgrounds aspired to fewer vocations than higher class students. The seniors were asked to choose a vocation for a hypothetical son and selected careers above their own preferred level. Ginzberg (46:235) discloses that high-level fathers spend less time assisting their sons with their vocational and college selections than they do helping their daughters choose a college or university.

Super (125:91) suggests that investigators of expressed vocational interests use phraseology that will elicit accurate responses. Asking "What do you *expect* to do after high school?" has produced different results from asking "What do you *want* to do after high school?" Stephenson (415) finds the greatest difference between responses to the two questions to occur in answers from the lowest-class students. In addition, occupational *plans* more closely reflect the paternal occupational level and community needs than do occupational *aspirations*.

Carp (208) discovered a higher proportion of students "desiring" jobs above their fathers' level than "expecting" them. Of Porter's sample (375), 53 per cent "expected" to work in jobs at their fathers' occupational level although a larger per cent "preferred" higher level jobs. Six months after graduation, about 80 per cent were working at their "expected" occupational level; fewer were working at the "preferred" level. Cole (19:615-616) also stresses the value in investigations which compare "hopes" with "expectations."

GENERAL FINDINGS: Ginzberg (46:234) feels that it is difficult for a father with a high-level job to introduce the work to his son; the occupational duties are often too remote and complex for the son to grasp easily. On the other hand, he notices that fathers with low-level jobs frequently discourage their sons from following in these occupations. Galler (265) states that social class influences children's occupational concepts at a very early age.

Hurlock (63:513) has enumerated the differences in behavior patterns characteristic of families in different socio-economic groups. They include table manners, home management, husband-wife relationships, family values, the use of money, child training, discipline, social conformity, and concepts in the roles of children, parents, and relatives. Super (70:228) cites differences in sexual behavior and Overstreet (490:323-324) adds the influences of cultural stimulation, the kinds of people the child meets in the home and in the community, financial and material possessions, and the tendency of the upper-classes to postpone immediate gratifications for future benefits.

Financial concern. Selection of a vocation because of the monetary rewards it will yield has been a factor in vocational choice as far back as the 1898 survey by Monroe (355) when it was mentioned by 44 per cent of the boys and 24 per cent of the girls. Financial remuneration has since been uncovered as a potent factor by Bradley (200) in 1943, by Mack (340) in 1957, and by Lockwood (335) in 1958. There is no agreement as to the relative part it plays (122:8).

High school sophomores and seniors of both sexes were asked to rank 26 occupations for social status by Folsom and Sobolewski (256) in 1957. A week later the same students estimated the yearly income for each of the 26. Positive correlations of .74 for the sophomores and .64 for the seniors were recorded.

Ginzberg (46:204) describes the recognition of financial problems by students in lower class families.

> Those from the lower income group early recognize that it will be difficult to realize certain goals because of limited family resources. This will adversely affect their willingness to continue certain preparatory activities. Actually, the group as a whole tends to underestimate the potential for realization which is actually theirs.

In 1959 Gropper and Fitzpatrick (51) isolated the lack of money as the most frequent problem for graduate students. In addition, a majority of graduate students stated that they were pursuing advanced studies for one major reason--to aid them vocationally.

VII. VOCATIONAL INTERESTS AND PHYSIOLOGICAL CHARACTERISTICS

Emphasis upon the developmental pattern of vocational selection has led to many investigations of the effects that physical differences might play. No one facet of the individual matures by itself; human growth is interrelated. Beilin (186), Jersild (70:54), and others see mental and psychological development as an inseparable correlary of physiological maturation.

Genetic factors. Carter (148; 161) has compared the vocational choices of identical and fraternal twins. Identical twins show a greater similarity in their occupational interests than fraternal twins, indicating that "interest patterns are at least indirectly dependent upon stable, possibly inherited factors."

The personality theorist placing the most emphasis upon physiology is W. H. Sheldon (113). He has developed a scheme of "somatotyping" by which individuals may be classified as to body type. Sheldon cites three basic components.

1.) Endomorphy, characterized by fatty tissue and by a love of people, comfort, food, and affection.

2.) Mesomorphy, characterized by solid, dense muscle and by assertiveness, activity, and a "push for power."

3.) Ectomorphy, characterized by a slim, linear body and by restraint, inhibition, and curtailed emotionality and sociality.

Sheldon (113:11) states that his investigations demonstrate correlations of above .80 between personality traits and somatotype indices. A somatotype index is based on a person's morphological structure. He is rated on a scale from 1 to 7 for each component.

Several of Sheldon's cases have been analyzed vocationally. Case 69 (113:321), for example, "probably illustrates vocational misplacement" because his somatotype of 2-4-5 shows too much ectomorphy for engineering. Case 90 (113:328) has a somatotype of 2-4-4 and "seems to be a clear case of vocational maladjustment" as a result of his decision to enter the ministry.

> There was a time when the combination of the 2-4-4 temperament and a high IQ could be successfully integrated in the profession of the Protestant ministry. But that time has passed. . . . The day of successful preaching at a relatively high intellectual level without the (endomorphic component) is gone.

Case 104 (113:333), "a 3-5-3, is trying to be a physical educator--the vocational niche of a 2-6-2. The profession of . . . physical education has quite naturally been pre-empted by the extreme mesomorphs." For case 178 (113:358), a commerce major at college, "business success appears virtually assured" because of his somatotype of 6-4-1.

In 1959 French (259) reported the results from a five-year study of Harvard graduates. He found six measures to be related to future occupational entry: personality traits, college grades, SVIB scores, mental ability, socioeconomic factors, and Sheldon's somatotypes. Sales personnel, supervisors, managers, and brokers were high in mesomorphy; editors, psychiatrists, diplomats, and college English teachers were low in mesomorphy. Lawyers were high in endomorphy and engineers showed no typical somatotype.

In 1958 Hulslander (293; 508) made an investigation of 72 high school boys and girls, recording their mental age, organismic age, dental age, and other measures. When results from an occupational questionnaire were tabulated and compared, mental age, reading age, and height age proved to have the highest relationships with vocational interests. Several physiological measures were mentioned as showing significant relationships.

1.) Higher occupational levels were chosen by those above average in carpal age.

2.) More computational interest was demonstrated by those above average in organismic age.

3.) More computational interest and less artistic interest was demonstrated by those above average in weight age.

4.) Less artistic and nature interests were demonstrated by those above average in grip age.

5.) Less nature interest was demonstrated by those above average in weight age.

6.) Girls above average in height age demonstrated more business interest and less science interest than boys above average in height age.

7.) Girls above average in dental age demonstrated more science interest than boys above average in dental age.

Hulslander concluded that "certain significant relationships exist between growth-in-age units and occupational interest choices of individuals." The data suggest a "parallel development" of all growth and personality factors.

Begelman (496) made an analysis of body build, intelligence, recreational activities, and college major for 950 freshmen in 1951. Physical education majors proved to be significantly heavier than the others while education majors generally were taller. Forestry students were shorter and more slender, while business majors excelled over all but physical education students in push-ups and sit-ups. Other relationships between gymnastic abilities and educational choice were negligible.

The physically handicapped are entering the world of work in ever-increasing numbers. In 1958 40 per cent of those rehabilitated through state agencies were handicapped by amputations, cerebral palsy, poliomyelitis, deafness, cardiac conditions, and other disabilities (162:58-59).

General health is listed as one of several possible factors affecting academic success by Stinson and Morrison (419). Roe (107:62-63) discovered that scientists on the whole are in good health but that theoretical physicists and social scientists have "more than the usual number of physical problems." Intellectually gifted children are somewhat more likely to be of superior health, height, and weight (107:62; 492).

Skin color. It is difficult to determine to what degree racial differences are due to genetic factors inherent in the individual or to environmental factors which surround him. Discrimination and prejudice in some segments of American culture affect the development of vocational interests in childhood and limit the occupational choices available to the adult nonwhite citizen.

EDUCATIONAL DIFFERENCES: Analyzing data from the 1950 U. S. Census, Brunner and Wayland (203) point out that in the male labor force the median number of years at school for nonwhites is 6.6 as compared to 9.5 for the total male population. Baer (179), using 1957 census figures, finds twice as many whites as nonwhites in the labor force holding high school or college diplomas. Fourteen per cent of the white workers did not complete high school as compared with 44 per cent of the nonwhites.

The most recent census figures indicate that the greatest educational spurt is among nonwhites. In 1940 only eight per cent of nonwhite adults had completed high school; in 1959, 20 per cent had done so (compared to 43 per cent of the total adult population). While 80 per cent of nonwhites were illiterate just after the Civil War, the figure in 1959 was down to eight per cent (compared to 2.2 for all adults) (297).

OCCUPATIONAL DIFFERENCES: The occupational distribution of nonwhite workers differs quite markedly from that of whites. Almost half the group of Negro, Indian, and Oriental citizens are farm workers, laborers, or household workers. One fourth are skilled or semi-skilled laborers, one fifth are clerical, sales, or service workers, while about one tenth hold professional, technical, or managerial jobs (31: 37).

Some change in the discrepancy between white and nonwhite occupations is in process due to educational improvements, civil rights legislation, opportunities in firms holding government contracts, migration of nonwhite families, training in the armed services, and a gradual decline in racial discrimination and segregation (31:49-50; 107:112-114).

Roe (107:113) states that many studies demonstrate that when the nonwhite worker is adequately trained, he is no less effective than the white worker. Until this occupational gap is closed, the United States will continue to have an undeveloped talent reservoir containing Americans of Negro, Indian, Mexican, Puerto Rican, and Oriental extraction.

Smith (406), in a 1937 study of eminent persons and their racial origins, determined that Indians have about one tenth as many chances for eminence as the population in general. Negroes have one third as many chances as Indians.

Negro-Caucasian differences have been frequently studied. Dingwall (28:27) states that Negroes have never been so deeply affected by "the Puritan view of life and the passion for wealth as a symbol of achievement and success."

Witty, Garfield, and Brink (466) administered vocational and educational questionnaires to 739 Negro and Caucasian high school students in Chicago during 1941. Of the Negroes, 99 per cent said they wanted to finish high school in comparison with 98 per cent of the Caucasians. Of the Negroes, 65 per cent expected to attend college, as compared to 44 per cent of the Caucasians, even though the Negroes studied came from lower socio-economic backgrounds.

The most popular vocations for Caucasian boys proved to be "engineer," "aviator," "mechanic" or "machinist," and "accountant" or "bookkeeper." Negroes' favorites were "postal worker," "musician," "doctor," "lawyer," "engineer," "aviator," and "teacher."

Caucasian and Negro girls both named "secretary," "nurse," and "teacher" most frequently. Next in popularity were "designer" and "beautician" for the Caucasians, and "social worker" and "beautician" for the Negroes. The investigators termed many of the choices for both groups "illusory."

Additional unrealism was demonstrated in Hurlock and Jansing's 1934 investigation (294) of Negro junior high school students in Harlem. Few conceived of becoming laborers; 50 per cent planned to enter the professions. Harrison (279) studied 1000 southern Negro high school seniors in 1952. Over 50 per cent of both sexes intended to become teachers; most of the other vocations named were among the professions. In a followup study one year later, Harrison (278; 280) noted that little progress had been made toward the occupational and educational goals of his sample. Only one half of those intending to enroll in college actually enrolled. Only one third were pursuing formal education or training leading to the chosen vocation; none were employed in the job preferred a year before. Of those not attending college, 42 per cent were unemployed.

Kiehl (308) has described the obstacles which Negro youth must overcome in making more practical vocational choices--and in carrying out the decisions once they are made.

Poor environmental background as well as lack of opportunity, occupational information, and vocational guidance are seen as critical problems.

A 1959 study by Edwards (33) revealed two striking differences between the backgrounds of Negro and Caucasian professional workers.

1.) Caucasian professional workers have a larger percentage of fathers in semi-skilled or service work.

2.) Over a period of several decades, Negroes entering the professions appear to come from increasingly higher occupational origins.

Edwards also reports that of all the professions, medicine has the highest prestige in Negro society. Furthermore, the increase in civil rights litigation partially accounts for the growth in the number of Negro lawyers.

VIII. VOCATIONAL INTERESTS AND PERSONALITY TRAITS

Until the mid-1920's research in vocational psychology consisted mainly of interest measurement and aptitude testing (264). As investigators began to recognize the emotional elements in vocational adjustment, increasing emphasis was placed on personality measures.

In 1927 Psychological Abstracts listed 28 studies in vocational psychology; only one of these (a study of cab drivers' responses to the Woodworth Personal Data Sheet) concerned personality factors. In 1957 102 investigations were listed; 33 of them involved the influence of personality (264).

Early emotional determinants. Factors are seen by many writers to affect vocational interests at an early age. The work of Tyler (132; 449) in this area has already been described. Gardner (483:883) presents a psychoanalytic appraisal.

> (Some) attitudes toward studies and jobs . . . are fixed by the earliest emotional responses of the child to frustration, insecurity, loss of love, and deprivations--all of which may be difficult to detect and even more difficult to alter to any degree.

Roe (107; 387) is well known for her investigations into early determinants of vocational choice. Feeling that "more than any other aspect of life one's occupation usually reflects most clearly the coalescence of the genetic and experiential variables," Roe (387) has summarized her research and related studies regarding personality traits and interests typical of each occupational group.

> GROUP I: SERVICE. Personal interactions are a predominant interest. The character of this interest is succorant and nurturant. Dominance, if present, is restrained. Interests are markedly "feminine" but there are few intellectual or artistic inclinations (107:181, 316).
>
> GROUP II: ORGANIZATION. Personal interactions are a predominant interest but are exploitative and dominant in nature. Persuasive interests are common; intellectual and artistic interests are not (107: 181, 316-317).
>
> GROUP III: BUSINESS CONTACT. Economic interests are important. Persuasive interests appear at the higher levels and clerical interests are higher than

for any other group. Non-intellectual and non-artistic, both poles of the dominance-submission relation appear, often depending on the level of work. The group tends to score near the "masculine" end of masculinity-femininity scales (107:182, 195, 317).

GROUP IV: TECHNOLOGY. This is one of three groups (with V and VI) in which the major orientation is towards "things" rather than "people." The upper levels show intellectual interests but artistic interests are low. Mechanical interests and "masculinity" ratings are high (107:317; 387).

GROUP V: OUTDOOR. Physical activity is a characteristic as are mechanical interests. Intellectual and artistic interests are lacking and the major orientation is toward "things" (107:210, 317; 387).

GROUP VI: SCIENCE. The orientation is toward "things" with the exception of social scientists and nurses. Intellectual inclinations are high; artistic interests are not (107:224, 317; 387).

GROUP VII: GENERAL CULTURAL. Interests in people and intellectual activities are high. Artistic interests are important in some occupations in this group; for both sexes scores nearer the "femininity" end of the scale are common (107:226, 234, 318; 387).

GROUP VIII: ARTS AND ENTERTAINMENT. With the exception of musicians, these occupations are generally narcissistic in orientation. The group tends toward "femininity" with the exception of athletes. Artistic interests are high; intellectual interests, for most occupations, are not (107:247, 318).

Roe (107:318) feels that early upbringing and family relationships are probably "the most significant single variable" for group differences.

Relationships between personality traits and vocations. Some psychoanalytically-oriented writers match unconscious drives with specific occupations. Ernest Jones (73) was the first psychoanalyst attempting this to any great extent. Korner (315), in 1946, proposed that impractical goals may be especially affected by unconscious determinants and paired sadism with surgery, exhibitionism with modeling, and dependence with child care. Berg (195), however, claims that this approach is frequently unproductive from a clinical point of view.

> The psychoanalytical formulation of occupational choice is enjoyable to read and speculate about; but like reading "true romance" stories before a first date, it is not much help in a practical situation.

A variety of personality measures has been used with both college students and adult workers. The Rorschach technique was administered during Kaback's 1946 study (150; 303) of students in pharmacy and accounting. The future pharmacists were generally more self-directed but the accountants were less impulsive. Both groups displayed a wide range of interests; neither group showed a great deal of anxiety. Kaback cites the variability of each group as the most notable feature of her study.

The personality characteristics of 153 eminent artists and writers were investigated by Drevdahl and Cattell (242) in 1958 with the aid of a pictorial projective test. When their responses were compared with those of the general population, the artists and writers were found to be less subject to group control. They were also more independent, dominant, adventurous, self-sufficient, emotionally sensitive, and displayed greater ego-strength.

"Good prospects" for clinical psychology differed in several ways from graduate students evaluated by their professors as "poor subjects" in Snyder's 1955 study (407). Utilizing the Minnesota Multiphasic Personality Inventory (MMPI) and three anxiety scales, "poor prospects" were found to have more feelings of inadequacy and inferiority. "Good prospects" were more independent, aggressive, unconventional, intellectual, and social; they were less "neurotic" and "religious." Both groups, however, were less maladjusted than undergraduate students in introductory psychology classes.

Veniard (454) also used the MMPI in 1946. Of the 97 women tested, clerical workers scored closest to the MMPI norms for the general population. Optical workers were higher on "hypomania" and saleswomen were higher on "masculinity" than the standardization group. Social workers, in a 1947 study by Lewis (330), made high scores in "depression" and "hysteria" but low scores in "hypochondria," "psychasthenia," and "schizophrenia" on the MMPI.

Administration of both the MMPI and the Kuder Preference Record provided a number of significant relationships, according to research finished in 1956 by Sternberg (416). Higher maladjustment scores on the MMPI coincided with literary, artistic, and musical interests; lower maladjustment scores correlated with scientific, computational, and mechanical interests. Feather (250), in 1950, also found that those with high maladjustment scores on the MMPI were more likely to have high literary, musical, and artistic interests on the Kuder. Interests in mechanical and scientific areas were less typical of the maladjusted group.

The Guilford-Zimmerman Temperament Survey was employed by Cuttle and Lewis (224) in 1958 and by Tanzer (520) in 1956. In the former study, male counselors scored above the general population norms in emotional stability, objectivity, and sociability. In the latter investigation, war veterans choosing vocations in the professional contact fields made high scores on ascendence and sociability. Low scores in these two areas were made by those choosing occupations dealing with materials and symbols.

The Edwards Personal Preference Schedule was administered to "career-motivated" and "homemaking-motivated" college women in 1958 by Hoyt and Kennedy (292). High marks on "heterosexuality" and "succorance" were obtained by the homemaking group; the career group was higher on "achievement" and "endurance."

Adaptations of Murray's Thematic Apperception Test have been widely utilized to determine psychological "needs." Small (152), in 1953, reported that maladjusted adolescents generally made unrealistic occupational choices; their needs were associated with avoidance of the environment, restriction of personal relationships, and disuse of talents. The better-adjusted, realistic group showed needs associated with environment involvement, formulation of personal relations, and exercise of talents. Minor and Neel (351), in a 1958 research project with war veterans, found a positive relationship between achievement needs and level of occupational preference. Extremely high achievement needs, however, were associated with less realistic occupational choices.

A personality test measuring religiosity and liberal-conservative attitudes was given 3000 college students by Nelson (361) in 1940. The most "conservative" tended to be future bankers, dentists, musicians, and government workers; the most "liberal" were majoring in journalism, law, and agriculture. Highest "religious" ratings went to those studying music, education, and for the ministry; future journalists, aviators, lawyers, and businessmen made the lowest scores.

Level of aspiration measures were given high school seniors by Ostrom (366) in 1949. High levels of aspiration were seen to be characteristic of occupational goals involving leadership and self-expression. Ziller (476), in 1957, reported results obtained with an instrument measuring "utility for risk." Those college students heading for military and sales careers ranked highest; the "undecided" group was lowest. Students in mechanical engineering ranked significantly higher than other engineers; Ziller points out that this field is the most crowded and the "risk" of becoming a mechanical engineer, therefore, is greater.

Gaither (503) used an "approach-avoidance" concept in describing the interest factors emerging from his 1958 data.

For the college group analyzed, an interest in the well-being of people correlated with an "avoidance" of non-professional work and physical labor. Interest in the physical sciences was linked with 'avoidance" of personal involvement. Interest in physical activities and tangible materials was associated with an "avoidance" of intellectual challenge and verbal or clerical work.

Occupational interests and mental illness. A century ago, it was common for writers to connect talent with instability. In 1833 Madden (89:2) wrote that

> It is generally admitted that literary men are an irritable race, subject to many infirmities, both of mind and body. . . . Eccentricity is the "badge of all the tribe."

Contemporary investigators do not subscribe to this point of view. To the contrary, mental illness is often connected with a failure to find creative outlets in one's work (370). Menninger (93:152) estimates that 75 per cent of those who come to psychiatrists "are suffering from an incapacitating impairment of their satisfaction in work or the ability to work." Frumkin (260) adds that the unemployed and the vocationally unsatisfied have the highest rates of mental illness, excessive drinking, and sexual promiscuity.

A 1952 investigation by Steinberg (413) indicated that veterans classified as "neurotic" tended to emphasize fantasy performance and unrealistic goals. The "non-neurotic" group made significantly higher Kuder scores in mechanical interests and lower scores in musical and literary interests.

Patterson (371), in a review of 30 pertinent studies, agrees that the mentally ill are generally unrealistic in their vocational plans and attitudes.

> Emotionally disturbed people tend to . . . be more fully interested in talent occupations or in social service types of work. Those interests may be inconsistent with abilities and aptitudes, and may represent an escape from reality or an attempt to find help for themselves in psychology or related fields.

The 1959 historical and statistical analysis of political leaders by Pitirim Sorokin (116) reveals many provocative results.

1.) Individuals and groups invested with power over their fellow man have been more ruthless, immoral, and destructive than those without such power. Moral integrity and mental health are in inverse proportion to the possession of power.

2.) The incidence of mental illness is higher among political rulers than among non-political rulers. Mental illness is more common to the latter, however, than among those who exercise no power over human beings.

3.) A hierarchical ratio of mental illness and criminality is found in descending scale from despotic political leaders to democratic political leaders to leaders of industry, labor, and finance.

In 1956 Hoselkorn (291) found that non-psychiatric hospital patients scored higher in mechanical interests on the Kuder than homosexual patients receiving psychotherapy. Ellis (246), in a 1959 investigation of 216 male patients, discovered degree of homosexuality to be directly related to loss of creative potential. Using Guilford's criteria for creativity, Ellis found heterosexual patients to be more creative than bisexuals. The latter were more creative than homosexuals who retained a "masculine" sex role who, in turn, made higher creativity scores than homosexuals adopting a "feminine" role. Degree of homosexuality was also related to clinical improvement, with the heterosexual group making the most progress.

Berbash and Shearer (180), in 1950, investigated the vocational backgrounds of 1029 men convicted of murder, burglary, larceny, assault, forgery, and sexual offenses. About half the group was employed at the time of arrest. None of these were professional workers. Six per cent were in clerical, sales, or service occupations; four per cent were farmers. Fourteen per cent were in skilled work, 25 per cent in semi-skilled, and 51 per cent in unskilled.

Greatest job stability was demonstrated by those convicted of murder, assault, and sexual offenses. Murders and sexual offenders received the greatest number of "good worker" reports. The assault group showed the least evidence of emotional disturbance.

Although 45 per cent of the group had IQs of 100 or above, 86 per cent did not go beyond eighth grade and 41 per cent did not go past fourth grade.

IX. VOCATIONAL INTERESTS AND THE CULTURAL MILIEU

An individual's "social inheritance" is not limited to family background and socio-economic status; it also includes the community and the country in which he happens to live.

In addition to his geographical situation, a member of a given culture is subject to the effects of prosperity, depression, peace, and war. All these factors are seen by such writers as Roe (107:103), Holland (289), Davis and Havighurst (26) to influence vocational selection. The latter two social scientists feel that the American culture exerts "more severe pressure upon the young child than does the culture of any other people in the world." Roe (107:103) describes the effect which the cultural context may have upon occupational opportunities.

> It is more difficult to make a living as an artist or a composer in America than in France, even now. There are fewer artists in societies which do not value artistic productions, and fewer philosophers in societies which are more intent upon material progress.
>
> The total cultural milieu may enormously limit the avenues of expression open to its members. This may be fairly direct, by failure to support the occupation or even by social ostracism of those who follow it. It may be indirect in the sense that cultural elements not valued by the society may never become known to the members of it.

Social conditioning. Cleland (219) has described how basic human needs are molded by the cultural environment. Such needs as those for security, approval, emotional expression, and self-fulfillment are the bases for specific interests which become delineated by means of "conditioning" in the societal setting.

The effect of social conditioning upon specific occupations is mentioned by Sternberg (416) and Murphy (163). Sternberg, finding maladjustment scores on personality measures to correlate with inventoried interests in art, literature, and music, attributes part of this phenomenon to cultural attitudes. Sternberg points out that the American culture places little value on esthetic undertakings; this increases feelings of frustration and failure on the part of young artists. In addition, those wanting to "break away" from society's standards often find outlets in the art fields, even if they possess little talent or ability.

Murphy (96:163), on the other hand, mentions that society has been willing to give freedom to young people interested in scientific and technological ventures. This freedom, not granted to most other forms of creativity and exploration, results from the "moment of technical mastery" which characterizes contemporary American culture.

A description of various facets of American life and their psychological implications has been made by Shaw and Ort (112:88). They have drawn several conclusions pertaining to Americans and their work habits.

> 1.) It is difficult to grow up in the American culture without being imbued with a considerable amount of success-striving, especially if one is from a middle-class background.
>
> 2.) "Many people reconcile themselves without severe psychological 'scars' to positions carrying only limited prestige in spite of growing up in a culture giving fairly serious emphasis to the idea that any boy can become president."

4

3.) Substitute achievements help sustain self-esteem. "A man who is not outstanding in his profession might prize highly his skill in golf."

4.) Greater happiness would result if an individual could "release himself to some extent from the idea, which prevails to a considerable extent in the American culture, that occupational success is the principal justification for living."

SUB-CULTURES: It would be a mistake to view the American culture as homogeneous and static in nature. Its influence upon vocational interests is altered by geographical and chronological factors.

Even children from similar socio-economic backgrounds and with similar endowments will be affected, vocationally, by the size and nature of their community. They will come into contact with different jobs and will be imbued with different attitudes about vocations. Sisson (403), in 1941, found 42 per cent of college freshmen from large cities choosing engineering as compared with 32 per cent of those from small towns and 20 per cent of those from farms. He concludes that residence "is an important conditioning factor in the vocational choice of college men."

Jones (485:455) reported, in 1952, that rural youth were more realistic than urban youth when comparisons were made between expressed occupational interests and aptitude test scores. Deunk (498), in 1953, found the size of a student's home town to be related to the size town in which he preferred to work upon completion of his education. Adams (174), in a 1954 study, found no association between place of geographic origin and the choice of a business career.

Hurlock (63:565) feels that social class and ethnic group standards vary to such an extent that their members live in "different types of cultural systems." Several writers have compared the adolescent world to that of a "sub-culture" (39; 266). Lynd and Lynd (86:23-24) have stressed the significance that "being born upon one or the other side of the watershed" portends for one's future education and occupation.

In a nation as large and varied as the United States, regional differences frequently create sub-cultures within the general culture. State laws often reflect these differences. Until very recently some states would not hire married women as teachers (107:104). State laws still vary in regard to educational requirements and the segregation of the races in public schools, though the latter is now unconstitutional.

THE ERA: "The occupational ideals of the individual are shaped by the social environment," writes Fryer (40:143). "When this changes, vocational ambitions change." Fryer (40:143-144) cites the "banking fad" during World War I and the "engineering fad" which accompanied technological advances as proof that "vocational fads come and go, or sweep over large numbers at certain ages. . . ." Garrison (41:342) has also commented on the tendency of large percentages to make "fad" choices "in harmony with the times."

Brill (15:331) attributes much job dissatisfaction to the transition from manual labor to machine work.

> The shoemaker no longer makes a shoe, but, as a hand in the shoe factory, he constantly performs a simple thing which is of no interest to him and soon becomes drudgery. When one compares this factory worker to the shoemaker of yore who took the measurements, selected the leather, and then put his whole personality into the making of the shoe, one can understand why the latter, as we still find him in some parts of Europe, is a much happier man.

In prosperity and peacetime, according to Mead (91: 230), a boy's heroes are policemen, firemen, flyers, cowboys, and baseball players, "men who act out in their real life roles the springing active motor impulses of the small boy's body." However, due to the emphases of the culture, he learns that if he wants to choose the police force or professional baseball as a career, "he will have to argue not that this is what he wants to do, but that it is something in which he can make good and make money and advance."

In depression and in wartime, different cultural emphases often arise. In 1943, during World War II, Bradley (200) surveyed the vocational plans of high school boys and found that the armed forces topped the list. In addition, about one out of every ten girls indicated she would enter military service after high school. Strang (119:510) reports that

> Society frequently intensifies the adolescent's problems of vocational adjustment. In wartime, adolescents are expected to grow up quickly because youth are needed to bear the brunt of war. During an economic depression adults try to prolong youngsters' childhood; they do not want children to grow up quickly and take adults' jobs.

Super and Wright's data (435) lend credence to Strang's contention. In 1928 before the depression, the age at which most high school students chose a vocation was 15.5. In 1933, during the middle of the depression, it was 17; in 1935 it was 18.9.

Super and Wright (435) mention the "unsettling affect of economic activity" as markedly affecting vocational selection. When asked the reasons for taking a job, pre-depression youth cited "interest" and "ability." During the depression, "opportunity for employment" became more important. In 1938 Bedford (160) reported a shift in students' vocational choices from 1928 to 1934. During the depression, male students cited farming and clerical work more frequently than did pre-depression youth. Business occupations were mentioned less often and professional careers were chosen with the same frequency.

Current cultural pressures seem to be implanting college goals in the thoughts of young people and their parents. Witty (522:44) describes college education for the child as "the ever increasing dream of the average American. . . ." Witty's 1960 data (522:80) reveal that 82 per cent of the boys in ninth grade and 75 per cent of the ninth grade girls wish to attend college, a development described as "an amazing phenomenon of American life."

Students' choices vs. job openings in the culture. The disparity between vocational goals and occupational opportunities has been the subject of great concern. Fryor (40:166), in 1931, reported "a five per cent opportunity and a 50 per cent choice of professions among high school students." Sparling (153) studied college males in 1933 and found that 70 per cent of them planned to enter the three most crowded occupations in the United States. Garrison (41:153), in 1934, concluded that "vocational interests and ambitions of high school pupils are not in harmony with the actual possibilities of employment."

Myers (359) revealed, in 1947, that 60 per cent of the high school seniors in his Washington, D. C., study intended to enter the professions. At that time, only ten per cent of Washington workers were employed in professional fields.

Witty, Garfield, and Brink (466) state that "young people frequently express a desire to prepare for occupations in which most of them cannot possibly engage." Lockwood (335) assigns much of the blame to the American culture: "Lower occupational levels simply do not attract boys and girls in a society with our traditions of self-advancement." Everett (501:87) concludes that

> There is, today, practically no prestige attached to vocations outside of the professions. . . . So long as social approval is directed only toward the professions so long will the majority of American youth strive for the reinforcement of social approval by unrealistically shooting at those goals which only a small fraction may possibly attain.

Because so many young people choose vocations in already over-crowded fields, some writers feel that when the impracticality of their goal is demonstrated they will become disillusioned and fall into the first available job opening. Steckle (117:263-264) describes the situation and its implications.

> The sad facts are that there is just no relationship between what our youth say they want to do and the actual opportunity for employment that exists in their chosen areas. Job selection, as it usually is made, becomes purely a game of chance. . . . This hardly is evidence for basic rationality in man.

The influence of sheer circumstance has been listed as an important factor by Bradley (200), Carter (148), and Super (154:83). Stone (420) ascribes vocational choice to "adventitious reasons and incidental motives."

Lynd and Lynd (86; 87) in their celebrated studies of "Middletown," ascertain that "most of the city's boys and girls 'stumble on' or 'fall into' the particular jobs that become literally their life work" (86:48). Lynd and Lynd (86:48) feel that this "laissez-faire" attitude stems from the pioneer tradition that "you can't keep a good man down" and the religious tradition that one must find his "calling."

Occupational research in other cultures. Investigators of vocational selection in other nations uncover both similarities and differences when comparisons with the United States are made. Occupational entry in primitive cultures is often found to be rigidly tied to sex, age, and family background (91; 107). Inhelder and Piaget (66:335) mention the variability found around the world in assigning adult roles to adolescents. Miller (487:243) describes a typical vocational pattern.

> Primitive people (understand at an)early age . . . just where they are going--to a maturity where all the elements are known, where no choices are necessary. All they need to do is to learn as efficiently as possible the same set of skills which make their fathers self-sustaining members of the society. The girls have a similarly simple outlook.

Although western cultures show some resemblances, Ginzberg (46:237) reports that in most European countries basic educational decisions must be made by the age of 11. A sizeable degree of occupational inheritance was revealed by McGuffin's 1958 investigation of boys in Northern Ireland (339). High level occupations were preferred by 85 per cent of the boys whose fathers held high level jobs and by only 5 per cent of those from low level backgrounds.

In 1959 Kunde and Dawis (318) reported on occupational prestige in three cultures. German, Filipino, and American adolescents rated 23 occupations as to social status; the correlations between the three ratings were very high (.93, .94, and .94). All three groups assigned the highest status to "physician"; "ditch digger" and "hod carrier" were at the bottom of each list. Hutchinson (295) reports similar results for Great Britain and Brazil.

Sinha and Niwas (397) studied university students in India during 1958. Students from wealthy families were motivated by the romance and adventure promised by an occupation.

Middle class students were motivated by social service; students from poor families were influenced by financial considerations. The latter two groups were also influenced by the popularity of the occupation. All three groups preferred to enter high-paying, high-prestige jobs.

Angelini's 1957 research project in Brazil (4) disclosed results similar to those previously recorded in the United States. The inventoried interests of ninth graders were compared by sex. Boys scored highest in computational, business, scientific, and executive interests. Girls made higher scores in persuasive, artistic, linguistic, humanitarian, and musical areas. Older students were tested with similar results (with the exception of linguistic interests in which boys scored higher than girls). Angelini notes the concentration "around those professions culturally valorized for each sex."

X. VOCATIONAL INTERESTS, PEERS, AND RECREATIONAL PURSUITS

The companions and activities that fill a student's leisure periods are potential determinants of vocational interests. The school and home make definite demands of a child's time; his strongest inclinations, therefore, may express themselves when he engages in recreation or associates with friends during his free hours.

Peers. The relative influence of age-mates and companions is a subtle agent and difficult to determine. It could prove to be a potent variable, especially at the age when the approval of the child's friends becomes more important to him than the approval of adults (63:563).

GENERAL FINDINGS: Jersild (70:209) states that approval and acceptance by one's peers become strong factors as a child reaches adolescence. The pressures of approval and disapproval by the group commonly outweigh the influence of an adolescent's parents and teachers, especially in regard to behavior standards, wearing apparel, speech mannerisms, and leisure time activities.

Influence on vocational interests by peers of the same and the opposite sex is mentioned by Super (428). Berdie (193) describes the influence of home and family upon a student's educational plans as "primary factors." However, "secondary factors," such as friends, teachers, and neighbors, often play a vital role in determining whether or not he will apply for college.

SPECIFIC DATA: In Everett's summary of literature regarding reasons for making a vocational choice (501:62), "the example or advice of relatives and friends" ranked third. "Liking the work" and "ability" were the only reasons more often cited by pupils. Peters (372), in a 1941 questionnaire survey, found students to list parents as the most influential factor upon their vocational choice--followed closely by peers in high school and friends in the occupation.

In 1956 students from lower socio-economic classes were studied by Beilin (497). The college-bound youngsters were found to differ from the others in several ways; one difference was the receiving of more encouragement from their peers to attend college.

Urban Negro adolescents frequently expressed a similar occupational aspiration as that of their best friend in a 1955 investigation by Pierro (516). However, this did not hold true for the rural Negro youth in his study. Bagley (494), in 1956, found neither rural nor urban sixth and eighth graders particularly influenced by peer approval of their vocational choice.

The 1958 Institute of Student Opinion poll (67) asked 11,000 junior and senior high school students to whom they would go for career advice. Peers were mentioned by about 6 per cent of the group.

(Source of advice)	(Boys)	(Girls)
My parents and relatives...........	28%	...... 28%
My school guidance counselor.......	18	 17
My teachers........................	17	 17
A business or professional man.....	14	 16
Publications.......................	7	 8
My clergyman.......................	8	 6
Friends about my own age...........	6	 6
Others.............................	2	 2

Grigg's 1959 data (270) indicated that women in scientific and mathematical fields were more interested, as children, in gadgets and things than in friends and companions.

Little's 1959 survey (333) found the majority of high school seniors planning to do what their friends were doing after graduation. "This influence was strong regardless of the plans of the graduate, but strongest among the college-going graduates." In 1959 Gilbert (266) reported that when youngsters were asked to name the "worst influence" in their lives, 91 per cent cited bad companions or adults outside their family. When asked to list the "best influence," good companions and non-relative adults were the choice of the majority. Only 20 per cent of the group mentioned parents as the most positive influence; fewer mentioned them as a negative influence.

In 1960 Orzack (365) completed a questionnaire survey of 378 high school girls. Noting that nursing was a popular vocational choice, he asked the girls to name the sources of their impressions about nursing and to evaluate them as "favorable" or "unfavorable." Impressions obtained from contacts with people and the mass media were mentioned; evaluations of the former are listed below.

(Source)	(Favorable impressions)	(Unfavorable)
Fellow students	35%	24%
Relatives in nursing	28	14
Relatives in medicine	16	9
Student nurses	38	20
Family doctors	30	14
Faculty members in nursing schools	17	10
Nurses in hospitals	31	19
Nurses in homes and offices	17	13
Guidance counselors	16	14
High school teachers	16	14
High school principals	9	8

In regard to peers, 59 per cent of the group listed them as a source of either favorable or unfavorable impressions, more than any other source.

Recreational pursuits. Although such investigators as Jersild (71; 72) have studied children's play activities, and although young people's interests in mass media have been recorded by Witty (143; 492) and others, relatively little has been done to determine the extent of the relationship which may exist between recreational and vocational interests.

GENERAL FINDINGS: Witty and Lehman (321) feel that "definite and pronounced" vocational attitudes appear early in childhood. The mass media are recurrent influences upon these ideas.

> Formation of these attitudes depends largely on knowledge acquired informally and, according to these observers, is absorbed from such sources as attendance at movies, perusal of magazines and books, and eavesdropping on adult conversation.

Jersild and Tasch (72:139), as well as Davis (25:138), have commented upon the small number of hobbies and out-of-school activities reported by young people. Lerner (326) suggests that more use be made of occupational films in the stimulation of youngsters' vocational interests.

SPECIFIC DATA: In 1931 Endicott (248) reported that boys seem to do more reading along vocational lines than girls. The 1949 data of Ostrom (366) indicate that high school students making higher scores on the occupational level scale of the SVIB engage in more out-of-school and extra-curricular activities than those with low scores. Super (428) cites research which demonstrates the positive influence of childhood hobbies upon adult careers.

Beilin (497), in 1952, described the difference between college-bound youth from lower socio-economic levels and those not planning to attend college. One of the differences was that the college-bound group engaged in more extra-curricular and leisure time activities.

The Stanford Institute for Communication Research (518), in 1959, asked fifth and sixth graders, "Who would you most like to be when you grow up?" The most popular choices for each sex show the influence of newspapers, books, films, and television programs.

(Boys)		(Girls)	
"A father," "a man"	19%	"A mother," "a woman"	19%
Elvis Presley	17	"Myself"	15
Eisenhower	6	Shirley Temple	7
Pat Boone	6	Dinah Shore	6
"Myself"	5	Elizabeth Taylor	5
Lincoln	4	Patti Page	4
Willie Mays	4	Gale Storm	3
Washington	3	Debbie Reynolds	3
Ricky Nelson	3	Jane Russell	3

In 1960 Witty (522) presented the results of an extensive research project on the interests of youth. One question asked the children to evaluate the influence of mass media on their educational activities. Television, radio, and films were cited as being helpful. In grades three through nine, about 35 per cent mentioned television, about seven per cent mentioned radio, and about ten per cent mentioned films.

Teachers, according to the children, often related televiewing experiences to such school projects as plays, class discussions, science activities, and sports. The most frequently cited "helpful" television programs were "Bold Journey," "Disneyland," "Science Fiction Theatre," "The Bell Science Series," and programs seen on educational channels. Radio newscasts and Disney nature films were also named by the students as beneficial.

Orzack (365), in a 1960 study previously described, had high school girls evaluate the impressions about nursing they had received from mass media.

(Source)	(Favorable impression)	(Unfavorable)
Radio	17%	7%
Television	38	16
Newspapers	27	17
Comic strips	11	11
Movies	31	15
Magazines	31	18
Books	32	16
Pamphlets	38	9
Catalogues from nursing schools	31	17
Catalogues from colleges	18	8

Non-school pamphlets contributed the largest percentage (38 per cent) of favorable impressions about the nursing profession when compared to the unfavorable impressions (nine per cent). Comic strips, on the other hand, were about evenly divided as a source of favorable or unfavorable impressions. When the girls were divided into those expressing a preference for nursing and those not preferring it, the former group reported a much larger proportion of favorable impressions.

XI. VOCATIONAL INTERESTS, SELF-CONCEPT, AND MOTIVES

The idea a person has about himself will influence his choice of a job, just as his vocation will, in return, influence his self-concept. Hughes (62:7) points out that "a man's work is as good a clue as any to the course of his life and to his social being and identity." O'Hara and Tiedeman (364) add that "the process of occupational choice may be characterized as that of developing a vocational identity."

Super (434) has constructed his theory of occupational development around the premise that it is "easily viewed as the implementation of a self-concept." Super (433) sees the child as formulating an idea of himself as a particular kind of person. When the child expresses a vocational interest, this reflects the type of individual he believes himself to be. When he selects an occupation, he is implementing his concept of the self.

As the self-concept becomes more firmly defined, the individual tends to ignore, distort, or forget those impressions and experiences which do not confirm the ideas he would like to believe about himself. This occurs, in the words of Carl Rogers (108:503-504), because

> (The) concept of self does not permit the intrusion of a perception at variance with it, except under certain conditions. . . . For the most part, it reacts as does a piece of protoplasm when a foreign body is intruded--it endeavors to prevent the entrance.

Rogers (108:505) adds that ideas which are in conflict with the self-concept are often repressed. Carl Jung (74:15) warns that an individual cannot take it for granted that he knows himself entirely because he is not aware of this repressed material and the other elements of the unconscious. "The ego," writes Jung, "knows only its own contents, not the unconscious and its contents."

Therefore, the motives which direct the conscious self toward embracing a particular vocation may be either conscious or unconscious and may be based upon accurate facts or distorted impressions.

The self-concept and its origins. Super (433) has listed the factors which interact to produce the self-concept.

1.) Inherited aptitudes such as manual dexterity and perceptual speed.
2.) Neural and glandular factors such as those affecting physical energy.
3.) Chances to observe and try out a given type of activity with a given type of competition.
4.) Observations of the extent to which the results of trying something meet with the approval of peers and superiors and satisfy personal needs.

Tyler (132; 449) has described the differentiation of roles which leads to a more highly structured concept of the self. When sex roles are comprehended, for example, a boy cuts himself off from girls' activities. Baldwin (6:225) and Conn (223) see sex membership as the role most clearly defined for the young child; identification with a particular sex leads to behavior differences in play activities and social demeanor.

Hurlock (63:466-469) cites the influence on the self-concept of family members, home and school environment, mass media, and identification with such "ideals" as parents, peers, heroes of history and fiction, contemporary celebrities, club leaders, teachers and other adults. Davis (232) sees the process of identification continuing into adolescence as youngsters identify with certain groups. He refers to the adolescent's attempt to achieve a sense of personal identity as his "most difficult task." This is the task referred to by poet T. S. Eliot (34) as

> . . . finding out what you really are.
> What you really feel.
> What you really are among other people.

Occupational Stereotypes. The ideas an individual entertains about an occupation often influence the ideas he has about his own vocational future. There is considerable data indicating that occupational concepts in the American culture fall into common patterns (271).

Grones (271), in 1956, reported a factor analysis of data involving the occupational percepts of high school students. There were two clusters (policeman-fireman and model-actor-airplane stewardess) which did not fall into the regular categories when students' opinions about job requirements were tabulated. The other clusters are listed below.

1.) Doctors, teachers, ministers, social workers, reporters, and engineers require intelligence, education, and social skills.

2.) Businessmen and business women must have intelligence, business abilities, and social skills.

3.) Carpenters, mechanics, and welders need strength and mechanical skills.

4.) Secretaries, stenographers, bank clerks, and office workers require verbal skills and business abilities.

5.) Farmers, ranchers, and truck drivers must have strength and stamina.

6.) Salesmen, store clerks, and waiters need social skills and business abilities.

7.) Ditch diggers, garbage collectors, and janitors must have strength.

8.) Dishwashers, cooks, maids, cleaning women, and housewives require little of anything.

Two investigations which explored high school students' attitudes about scientists were reported in 1957. Remmers and Radler (104:165) stated that 14 per cent of the teenage sample felt there was "something evil" about scientists. They were viewed as "odd" by 25 per cent; 28 per cent felt that scientists did not have time to enjoy life. Just as many potential scientists felt negatively as did those of lesser scientific aptitude.

Mead and Métraux (346) analyzed the data from essays written by high school students. Science was seen as the source of unlimited power which "should be used for the benefit of mankind." The scientist was described by one group of students as a man who indulges in dull, uninteresting work, who neglects his family, and who may "lose his religion." Another group called him "dedicated" and "intelligent," while a third type of response emphasized his experimental work in a laboratory, "surrounded by equipment" and working for long hours.

College students also seem to have stereotyped ideas about scientists, according to a 1949 investigation by Bendig and Hountras (189). Research scientists were seen as being "intellectual," "logical," "orderly," "persistent," "precise," "studious," "thorough," but to lack charm, humor, poise, and self-confidence. The same study disclosed that desirable intellectual traits were thought to be more characteristic of scientists and lawyers than other groups. Businessmen and lawyers were seen to possess desirable personal traits, while scientists and engineers lacked them. Businessmen were felt to lack desirable intellectual traits.

Beardslee and O'Dowd (495) studied student images of key occupations in 1959. Many comparisons can be made between some of the most frequently mentioned characteristics of the occupations studied. Scientists were felt to be "intelligent," "persevering," and "thoughtful" but to lack human attributes and an interest in the arts. College professors were also "intelligent," "persevering," and "thoughtful," but were "more human" and were interested in the arts. Doctors, sales managers, and social workers were all described as "persevering" and "attentive to people." In addition, doctors were termed "responsible" and "intelligent"; sales managers were "confident," "self-assertive," and "sociable." Social workers were thought to be "sensitive" and "unselfish." There were few significant differences when the ratings were examined by sex.

Another investigation of college students was conducted by Walker (457) in 1958. The subjects chose, from a list of 85 adjectives, those which best described certain groups.

1.) Lawyers: "alert," "calculating," "well-educated," "shrewd," and "clever."
2.) Doctors: "intelligent," "efficient," "well-educated," and "humanitarian."
3.) Teachers: "well-educated," "intelligent," "friendly," "tolerant," and "fair-minded."
4.) Politicians: "ambitious," "evasive," "argumentative," and "power-seeking."
5.) Coal miners: "rough," "tough," "friendly," "honest," and "industrious."

No significant differences were found when the data was analyzed by sex, political affiliation, or vocational goal. Walker concludes that stereotypes influence role expectations and probably "play an important part in vocational choice."

Current investigations of occupational stereotypes have been reported which use other techniques; one study utilizes a "semantic differential" (511), another a "Neo-Freudian" approach (513).

Hughes (62:7) has pointed out that the name of an occupation, in American society, is a combination "price tag and calling card." Several investigators have sought to determine the social status commonly assigned to an occupational label. Stefflre (411), in 1949, listed the elements related to evaluation of social status: intelligence, income, security, job freedom, education, control, self-realization, altruism, prestige, and independence of choice. A study of high school juniors indicated that education and intelligence were the most significant factors; job freedom was the least significant.

Ratings of vocations were elicited for typically male jobs in 1947 by Deeg and Patterson (233) and for women's jobs in 1948 by Baudler and Patterson (184). The subjects were asked to rank a list of occupational titles according to "social status."

(Male occupations)	(Female occupations)
Physician	Doctor
Banker*	Artist
Lawyer*	Registered nurse
School superintendent	Journalist
Civil engineer	Symphony orchestra musician
Clergyman	High school teacher
Teacher	Designer
Machinist	Commercial artist
Insurance agent	Secretary
Electrician	Buyer
Farmer	Elementary school teacher
Grocer	Music teacher
Mail carrier	Practical nurse
Traveling salesman	Dance orchestra musician
Plumber	Typist
Bus driver	Dressmaker
Soldier	Salesperson
Barber	Office machine operator
Coal miner*	Hairdresser
Truck driver*	Sales clerk
Janitor	Telephone operator
Hod carrier	Factory worker
Ditch digger	Servant
	Waitress
	Laundry worker

*tied

Baudler and Patterson conclude that the list might be modified if the educational system "were fully effective in inducing youngsters to realize that each of the occupations makes an . . . important contribution. . . ."

Self-concept, occupational stereotypes, and vocational pursuits. Vocational self-concept in adolescence was investigated by O'Hara and Tiedeman (364) in 1959. Defining self-concept as "an individual's evaluation of himself," the aptitudes, interests, socio-economic backgrounds, values, and self-evaluations of 1021 high school boys were studied. O'Hara and Tiedeman note "increasing clarifications of self-concept" in these areas, although aptitudes were "poorly perceived throughout grades nine through 12 even by academically able boys."

In 1951 Resnick (382) found a positive relationship between high school grades and favorable self-concepts. A 1959 study by Kinnane (509) involved twelfth grade boys. Realism of vocational preference was found to be related to self-acceptance and positive self-attitudes.

Another investigation of twelfth grade boys was reported in 1960 by Schutz and Blocher (393). Students checked their vocational preference and, a week later, selected a stereotypic description which they felt characterized them. When the vocations and the descriptions were compared, significantly more students were consistent in selecting as self-descriptive the stereotypic sketch of workers in the occupation they had previously named as their vocational preference. The students were not told of the connection between the two activities or that the sketch described workers in a vocational field. Schutz and Blocher state that their results support Bordin's theory.

> He contends that a person's occupational interests are a function of his self-concept and his stereotype of various occupations. Bordin suggests further that an individual interest in a vocation varies directly with the degree of acceptance of the occupational stereotype as self-descriptive.

Student nurses were investigated by Berg (194) in 1947. Those who dropped out of nursing "had expected to manipulate various gleaming, complicated instruments while assisting at operations. Instead, they made beds and rubbed patients' backs." The expectations of those who remained in nursing were in closer accord with their required duties. Those who dropped out did so "when the reality of nursing did not jibe with the role they had anticipated." This situation demonstrates a hypothesis promulgated by Super (434).

> . . . the job . . . may not be the same as the role aspirations of the individual. In such a case, the individual must adapt himself to the requirements of the situation, adapt the situational requirements to his needs, or leave the scene.

The relationship of job satisfaction to self-concept and motives has been frequently examined (384). Strong (423) indicates that there has been more progress in measuring capacities than in ascertaining workers' goals. "The greater the chance of attaining goals," he writes, "the greater probable satisfaction." Brophy (202) relates satisfaction and self-concept.

> . . . satisfaction is maximized when a person's objectively determined characteristics, his . . . perception of self, and his . . . conception of the kind of person he would like to be in fulfilling environmental demands are all congruent, and furthermore are appropriate to the actual environmental situation and to the situation as he perceives it. . . .

Bell (187) states that vocational counselors have moved away from merely "fitting square pegs into square holes" and are considering such elements as ego-involvement and self-structure.

As an example of the part played by the self-concept, Bell cites the case of "John." The young man arrived at college intending to major in nuclear physics, but his grades proved to be mediocre in this field. Aptitude tests indicated exceptional verbal ability but only average ability in mathematics. On the SVIB he received a "B minus" rating in physics but an "A" in law and psychology.

> The evidence against his present vocational choice was mounting, and yet the voices of his past "I" projections were haunting him. He could hear himself say "I am going to be a nuclear physicist." His mother's voice spoke with pride: "John is going to be a great scientist." Father's voice at the Rotary Club said: "John is going to the university to work on the atom smasher."
>
> With all these pressures from his past working on him it was very difficult for him to give up this goal, though he knew he was on the wrong road.

After discussing his three semesters of steadily declining grades with a counselor, John switched to a liberal arts major. He made superior grades and went on to receive a Ph. D. in psychology. His story bears stiking testimony that the self-concept can hinder as well as aid proper vocational placement.

MOTIVATION, GOALS, AND VOCATIONAL CHOICE: Strong motives toward definite goals are usually corollaries of well-defined self-concepts. Cochrane (220), in 1959, administered "motivation" tests to school children and concluded that ". . . measurable qualities are present in seventh grade youngsters" which can identify, to some degree, future scientists and engineers.

High school boys were administered a checklist by Crowley (226) in 1959. Educational and vocational goals were determined for the future; the two most frequently cited goals for each year are listed below.

1.) Goals for the senior year: to graduate; to be accepted by a college.

2.) Five years later: to graduate from college or technical school; to get married.

3.) Ten years later: to be settled in a job; to be an ideal husband and father.

4.) Twenty years later: to have a happy family; to like the job.

5.) Looking back on one's life: to have been a good husband and father; to have lived a happy life.

Crowley concludes that "the stated goals of the students are not monetary, glamorous, or selfish." They are "striking evidence of a wholesome outlook on life."

MOTIVATION, GOALS, AND ACADEMIC ACHIEVEMENT: Crawford (21) studied the relationship between scholastic record and individual purpose in 1929. "Those who came to college with some definite aims . . . and who kept their aims in mind, made definitely superior records."

A positive relationship between college grades on the one hand and motivation, goals, and self-direction on the other, was also demonstrated in studies by Marshall (344) in 1943, Wightwick (159) in 1945, and Berdie (190) in 1955. The *Encyclopedia of Educational Research* (55:732) summarizes the investigations.

> The conclusion drawn from a number of studies is . . . when factors such as aptitude and extraneous motivation . . . are held constant . . . intrinsic motivation is moderately related to success.

XII. VOCATIONAL INTERESTS,
RELIGION, AND VALUES

Religious attitudes and values have been so dominant in the lives of many men that they have functioned as primary objectives. With others, they become one of many agents influencing choices and decisions. Strong (122:144) writes that "people have religious . . . beliefs or values which cut across occupational interests. These values must be included in any thoroughgoing measurement of future behavior."

Religious background and church affiliation. Religious preference as well as vocational choice is influenced by several factors. A few studies have attempted to investigate connections between these two decisions.

GENERAL FINDINGS: Religious background once exerted a powerful influence upon the vocational roles of entire populations. Murphy (96:823) describes how during the middle ages a person knew "who he was" by virtue of a rigid caste system sanctioned by church and state.

> Not only civil authorities, but God in heaven, had ordained that one be a butcher, a baker, a candlestick maker, or a . . . serf. . . . From the earliest days of his life, the individual knew where he stood.

At the present time, a majority of Americans are church members, yet Hurlock (63:443) reports evidence indicating that religion is a "secondary and waning influence" in American families.

Jersild (70:341) reports a wide range of religious speculation among adolescents; Bossard and Boll (12) state that many persons, when they become parents, resume religious practices which for a time they had neglected.

SPECIFIC DATA: Davis (231) reported, in 1953, the results of an analysis of an eastern edition of *Who's Who*. Unitarians had the largest amount of denominational representation in proportion to church membership (20 persons per 100,000 male church members). Roman Catholics had the smallest (one tenth person per 100,000 members). Congregationalists, Episcopalians, and Presbyterians had four persons, while Methodists and Baptists had one person per 100,000 members.

An earlier study (377) had found the Jewish ratio to be 20 persons per 100,000 members.

President J. J. Cavanaugh of Notre Dame University (377) is reported as saying that "the intellectual prestige of American Catholics seems to be lower than the intellectual prestige of Catholics in any other country in the whole Western world." Cavanaugh cites evidence for this assertion.

1.) There are only ten Roman Catholics in the U. S. Senate.

2.) Of *Forbes* magazine's listing of 50 business leaders, only two are Catholics "and one of these two, Henry Ford II, is a convert."

3.) Out of 300 Americans named for scientific contributions by *Scientific Monthly*, only three are Catholics.

4.) Out of the 50 institutions turning out the most scientists, not one is Catholic. "Where are the Catholic Salks, Oppenheimers, and Einsteins?" asks Cavanaugh.

Roe (107:112) found few Roman Catholics in her studies of prominent American scientists. In addition, "the Protestant sects contributing the fewest scientists also discourage free inquiry among their members and exercise a tight control over them." In regard to church-affiliated schools, Knapp and Goodrich (80) reported, in 1952, that scientists are more likely to come from Protestant colleges and lawyers from Roman Catholic colleges.

Havemann and West (56) describe the occupational status of college graduates for America's three major religious groups as of 1948.

(Occupation)	(Jews)	(Prot.)	(Cath.)
Non-teaching professionals	45%	34%	32%
Teachers	6	12	13
Proprietors, managers, executives	33	34	26
Blue-collar workers, laborers, farmers	16	20	29

Furthermore, 27 per cent of the Jewish graduates were earning over $7500 per year as compared to 21 per cent of the Protestants and 15 per cent of the Roman Catholics. There is some indication that all three groups started off on an "equal" basis as approximately the same percentages were receiving scholarship aid in college.

Clark (217) discovered, in 1949, that Jewish students did better in school than one would expect on the basis of IQ alone. McClelland (88) refers to Jews as "high achievers" in school whereas Catholics, in comparison to other groups, are "low achievers."

Parental expectations for Jewish students were found to be centered around high-level occupations by Strodtbeck, McDonald, and Rosen (422) in 1957. This might explain the high attainment characteristic of many Jews despite discrimination and prejudice both on the academic scene and in the world of work. Smaler (111:16) tells Jewish youth that "the existence of discrimination should be a challenge and not an insuperable barrier."

Values. The growing child, according to Hurlock (63:468) selects the values which the culture stresses the most and which have special appeal to his individual situation.

Rogers (108:523) explains this in terms of the person's psychological development.

> Values are always accepted because they are perceived as principles making for the maintenance, actualization, and enhancement of the organism. It is on this basis that social values are introjected from the culture.

GENERAL FINDINGS: Layton (319) has surmised that occupational choice may reflect an individual's value system. Five major types of values are listed by Centers (479): independence, security, self-expression, social service, and interesting experiences. Of minor importance are power, fame, leadership, esteem, and profit. Of these values, Centers (16) has attributed self-expression to middle class workers while security is the major value of lower classes.

In regard to occupational groups, Centers (479) feels that professional, business, and white-collar workers place high values on independence, self-expression, and interesting experiences. Manual laborers emphasize security. Those in educational and religious work value social service opportunities.

Darley and Hagenah (23:132) state that business contact and verbal-linguistic occupations value power, status, and prestige. Social service careers emphasize altruism while the physical sciences value a rational understanding of the world and intrinsic satisfactions found in the work itself.

Riesman (105:162-163) describes the young men and women who "no longer seek fame and monetary success or even ease of life." They hope to enter "jobs that service people or ideas rather than things."

> Some will become psychiatrists, but others, democratic in spirit, uncompetitive, unethnocentric, will be teachers and may find as great a challenge in working, for example, with slum children as missionaries in an earlier day found in working with preliterate tribes. . . . Thus, while understandably a very large proportion of teachers will continue to look to their profession for status, it seems to me that we can expect an increase in the ranks of those teachers who enter the profession not in search of status but in search of a meaningfully useful life.

SPECIFIC DATA, HIGH SCHOOL STUDENTS: Investigating 1018 junior and senior high school boys and girls in 1948, Edmiston and Starr (245) determined that the values of adventure and responsibility were of least importance in job considerations. The most important values were advancement, security, service to mankind, location of work, effect on health, fringe benefits, and freedom from political influence. Of medium importance were independence, social contacts, variety of experience, social approval, salary, type of work, ability requirements, and involvement with community activities.

Jersild and Tasch (72), in 1949, found that as children grew older, higher emphasis was placed on self-realization and social service. The tendency of lower socio-economic classes to desire immediate satisfaction and for the higher classes to postpone gratifications for future rewards has been established by Beilin (497) and Jersild (70:227).

Singer and Stefflre (400), in 1954, found students with higher occupational aspirations to value leadership and self-expression in a career. The same authors (399), in 1954, observed that boys valued jobs offering power, profit, and independence; girls selected "job values characterized by interesting experiences and social service."

The Institute of Student Opinion (67), in 1958, asked high school pupils to check values they would desire when looking for their first full-time job.

(Value)	(Boys)	(Girls)
Opportunity for advancement	23%	19%
Future security	22	21
Challenging, interesting work	17	21
High pay	15	9
Pleasant working conditions	11	14
Service to mankind	8	12
Community standing	3	3
Other values	1	1

The same poll asked what school subject would probably be of major value in the student's future career.

(Subject)	(Boys)	(Girls)
Mathematics	31%	8%
Science	24	20
Occupational courses	23	4
English	9	22
Social studies	6	5
Commercial courses	5	37
Foreign languages	2	4

Interesting work and security were given preference in a study of values conducted in 1959 by Dipboye and Anderson (236; 237). "Fringe" benefits and job independence were rated least important.

School leavers, in data gathered by Mitchell (354) in 1958, stressed different values depending on their sex.

Male drop-outs mentioned long-term benefits such as the opportunity to learn a craft, training programs, and promotional opportunities. Girls who left high school before graduation cited short-term benefits (remaining close to home, earning a good salary, having steady employment).

SPECIFIC DATA, COLLEGE STUDENTS: Graduating seniors were studied by Dickinson (227) in 1954. High values were assigned to occupational advancement by those majoring in accounting, business administration, and sales. Education students assigned lower values to advancement and higher values to human relationships, working conditions, and job security. Working conditions were rated low by accounting students as were human relationships by those in administration; both groups also assigned low values to type of work called for by the job.

Another group of college men was investigated by Miller (350) in 1956. Those with definite occupational choices ranked social rewards high in their scale of values. These included helping people, having interesting co-workers, and working in a pleasant environment. Those in the "undecided" category ranked security values higher (steady income, lack of employment hazards, etc.).

Economic or "get rich" values were high for college freshmen choosing business and law majors in a 1956 study by Hammond (277). Using occupational attitude rating scales, those in social service, education, and the social sciences were found to score high in acceptance or "love people" values. Personal status or "be somebody" values characterized future journalists and actors; structure or "be right" values were important to those in engineering and the natural sciences.

Rosenberg (110:12) reported the predominant occupational values of over 4500 college students in 1957.

(Value)	
Opportunity to use special abilities	27%
Opportunity to attain a secure future	24
Opportunity to earn a great deal of money	10
Opportunity to be creative and original	10
Opportunity to be helpful to others	10
Opportunity to work with people	7
Opportunity to attain leadership positions	4
Opportunity to be free from supervisory control	3
Opportunity to attain status and prestige	2
Opportunity for adventure and excitement	1
Other values	2

Those students heading for careers in social work, teaching, medicine, government, personnel, and the social sciences were oriented towards other people in their value structure. Self-expression was more important to future actors, journalists, architects, artists, and natural scientists; extrinsic rewards (such as salary) were of greatest value to those in business, real estate, finance, sales, promotion, law, advertising, and hotel administration (110:17). The value of high monetary rewards was found to wane through one's college career (110:125).

Bendig and Stillman (188), by means of factor analysis of their 1958 data, found certain values to be opposed.

Those college students who valued job autonomy placed little value on supervisor dependency, and vice versa. Those high in achievement were low in fear of failure. Interest in the job was opposed to status acquisition. When asked to state job incentives, three major categories emerged: service to others, job security, and interesting experiences.

Struck (426), in 1958, found that altruism, "divine calling," and the desire to reform society characterized ministerial students. Future teachers were found by Horton (362), in 1953, to emphasize self-expression, status, and contact with people.

Hoyt and Kennedy (292) compared career-oriented and homemaking-oriented college women in 1958. The homemaking group was imbued with the values of affection and acceptance, while four "relatively independent" values characterized the career group. These were described as the accomplishment of concrete goals, the establishment of worth through competitive behavior, the attainment of intellectual ability, and the avoidance of relationships with men. Women rank "desire for marriage" as their highest value, according to Kuhlen and Johnson (317). After turning thirty, "advancement" becomes the major incentive for those still unmarried.

The Allport-Vernon Study of Values was designed to measure the relative strength of six basic values: economic, theoretical, esthetic, social, political, and religious (455). The instrument was utilized by Ryan (517) in a 1953 investigation of 270 college students. Those making realistic vocational choices scored higher in theoretical value and lower in economic than did those in the "unrealistic" category.

XIII. VOCATIONAL INTERESTS, APTITUDE, AND SPECIAL ABILITIES

An observer unfamiliar with occupational literature might think that ability plays the most vital role in determining occupational interests. It would seem logical that a person should possess the aptitude for the job he wants to procure.

Logic to the contrary, this does not seem to be the case. Fryer (40:209) comments that the relationship between occupational interests and occupational aptitudes is so low that "subjective interests cannot be used for the prediction of abilities."

This gap between vocational interests and vocational aptitudes is undoubtedly a major factor underlying job dissatisfaction, employee absenteeism, and emotional problems related to work (61; 384). John Dewey (27) describes the predicament quite well.

> To find out what one is fitted to do and to secure an opportunity to do it is the key to happiness. Nothing is more tragic than failure to discover one's true business in life or to find that one has drifted or has been forced by circumstances into an uncongenial calling.

Vocational requirements. Young people might develop more appropriate vocational interests if they were aware of the aptitudes and abilities needed for various jobs. This material is available from several sources. The U. S. Department of Labor (165; 167; 450), for example, has estimated the worker trait requirements for over 4000 occupations.

Branche (13) has prepared lists of qualifications for 239 vocational fields. An example is her description of an airline stewardess which reads, in part, as follows.

1.) Place of employment: commercial airlines.

2.) Nature of the work: check passengers in, put them at ease, answer questions, serve food and beverages, distribute reading matter, fill out records, give minor medical aid.

3.) Workers in the field: 7500 (in 1956).

4.) Percentage of women in the field: 100 per cent.

5.) Education required: high school. Airlines provide about six weeks of training. College, business experience, or nurse's training is helpful.

6.) Special qualifications: unmarried; age and physical requirements; emotional stability; charm, poise, initiative.

7.) Earnings: begin at $200 to $280 per month; experienced workers earn $280 to $350 per month.

8.) Hours: 85 hours per month in flight, about 15 in ground duties.

9.) Health hazards: high altitudes and standing may be strenuous; danger of crashes.

10.) Trend of employment: Up; high turnover rate.

11.) Competition: very keen.

12.) How to enter field: apply directly to airlines.

13.) Advancement: limited.

14.) Seasonal variation: none.

15.) Where jobs are located: most are with domestic airlines.

Blum and Balinsky (11) have prepared a survey of a different nature, reporting test score similarities for workers in various jobs. Wechsler (137:236) refers to this volume as "the most extensive study on the relation between test scores and occupational levels. . . ."

Hahn and MacLean (52) point out that for some jobs, certain abilities are of no importance and may even be a handicap. A research scientist, for example, may find that a lack of social ability will aid his concentration on the job before him. They classify special abilities into thirteen categories.

1.) Academic, scholastic, or verbal.
2.) Numerical and mathematical.
3.) Spatial.
4.) Scientific.
5.) Mechanical.
6.) Manual skills.
7.) Physical agility.
8.) Artistic.
9.) Musical.
10.) Social.
11.) Clerical.

12.) Executive.

13.) Practical.

Super (124) finds that vocational aptitude tests have concentrated upon clerical, manual dexterity, mechanical, spatial, artistic, and musical abilities.

Although special abilities are of vital importance, Strong (120:524) thinks that there may also be a critical point of general mental ability below which success in a given job becomes doubtful. The average mental ability scores for several occupations were reported by Stewart and Sison (417) in 1947 and by Levitt (396) in 1950.

THE RELATIONSHIP BETWEEN INTEREST AND ABILITY: Strong (122:4) traces the development of interests back to childhood experiences and states that "aside from a few stimuli to which we apparently have inborn . . . responses, one learns to like or dislike activities." Activities are reinforced if they are useful in attaining some goal. Garrison (42:259-260) states that there is some relationship between early interests and abilities but stresses the fact that an ability might be slight in comparison to that of others but still strong enough to reinforce a response.

In 1912 E. L. Thorndike (441) wrote that interest and ability are so closely related that "either may be used as a symptom of the other almost as well as for itself." Since that time, however, opposite conclusions have been stated. Reviewing the research in this area, Cole (19:619) concludes that "there is either a low relation or none at all between . . . interest and special skills."

Investigations into the relationship done by Fryer (40:209, 232) in the 1930's produced correlations of from .30 to .60 between vocational interests and abilities. Many of these, such as the relationship between mechanical interest and mechanical ability, proved to be negligible. Fryer was convinced that "interests and abilities are different qualities in mental life; neither one is dependent upon the other."

High school graduates were followed up by Cass and Tiedeman (212) in 1960. Their aptitudes were not found to be predictive of their future occupations.

> Youth are little aware of aptitude as they enter high school. . . . (They) ignore potential because their information, progress, experience, and resulting orientations do not permit its consideration.

Inventoried interests have been used as well as expressed interests to investigate the relationship. Strong (122) reports that most research done with the SVIB has produced no positive correlations higher than .30. Darley (122) used the SVIB in a 1941 study and found correlations ranging between .04 and .31.

The Kuder Preference Record has been utilized in several investigations. When Kuder and Adkins (175) matched it with ability test scores in 1940, only one correlation above .30 was uncovered, that between computational interest and numerical ability for women.

In 1953 Anderson (177) matched Kuder scores with an aptitude test battery given to several hundred men. The highest correlations were between computational interest and mathematical aptitude (.26) and between clerical interest and clerical-numerical aptitude (.23). As for the rest of the data, Anderson states that "coin flipping would be equally valuable as a basis for estimating the results."

Hirt (287) reported, in 1959, that "aptitudes are more or less independent characteristics." His study compared Kuder scores with nine aptitude tests taken by adult males. Once again, computational and clerical interests correlated positively with a number of aptitude scores. But the bulk of the data convinced Hirt that "it seems safest to conclude that interests and aptitudes, although related, are sufficiently independent to be considered singly when used in vocational and educational counseling."

REALISM OF CHOICE: Our review of occupational literature has detected studies reporting relationships between appropriate vocational choices and age (186), sex (404), intelligence (471), family background (500), occupational-educational experience (355), socio-economic factors (499), personality traits (195), motivation (351), and the structuring of the vocational questionnaire (485;452). Korner (315) concludes that the origins of both job realism and unrealism are multiple in nature.

In commenting upon the abundance of studies in this area, Everett (501:87) concludes that "there can be no other conclusion but that the ambitions and aspirations of American youth are not realistic in their origins."

Preferences have been evaluated as "impractical" or "unrealistic" by two main criteria: the available openings in the occupational market and the individual's suitability for the job (335). In regard to the latter criterion, several investigations indicate that aptitudes and abilities are not taken into account by many youngsters as they develop vocational interests and state their career preferences.

Jersild (69:519) notes that many elementary school pupils prefer careers that are "considerably out of line" with their abilities. Fleege and Malone (255) report that 50 per cent of the high school boys and girls in their sample select occupations that are beyond their mental capacities. Wrenn (471) discovers that one half of the lowest 15 per cent of college students (in mental ability) prefer high-level professions. Stubbins (427) finds 26 per cent of the veterans in the study making choices which are unattainable. Of Jones' group (485:455), 30 per cent intending to enter the professions after high school have no intention of attending college. Sparling (153) discloses that 75 per cent of the prospective teachers in his study have college grades below 80 in the subjects they intend to teach. Hurlock's conclusion (63:471) is that skills and abilities are not taken into consideration.

> The choice is, as a rule, based on factors other than ability or fitness for the occupation chosen. . . . On the whole, their choices of vocations are not based upon practical considerations.

A few studies, reported in the past two years, have investigated the realism of vocational preference with more encouraging results. In 1958 Lockwood (335) selected 500 high school seniors of both sexes and varied backgrounds. Rating all students on a "realism scale," he arrived at an average score of 5.5; the lowest possible score was 1.0, the highest was 10.0, and the optimum was 5.0. More students were "undershooters" (scoring 6.0 and above) than "overshooters" (scoring 4.0 and below). Intelligence was found to be related to higher realism; race, sex, and family background were not. Lockwood suggests that personality traits and developmental histories could be of additional assistance in explaining reality scores.

Witty concluded his 1960 study of vocational interests (522:99) by stating that "the students in this investigation appear to be more realistic in their choices of occupation than pupils in studies made a decade or more ago." O'Hara (515), in 1960, found 1200 pupils in grades four through six "more reality oriented than had been previously thought." It should be mentioned that many of the schools involved in these three studies have guidance programs and full-time counselors.

Ability requirements for college. The Roper study (109) indicates that 69 per cent of American youth are expected to attend college; the Witty investigation (522) suggests that at least that many plan to apply. College admission, however, is becoming increasingly more difficult due, in part, to academic aptitude tests required of the aspirants (452; 453). Median college scores for one of these measures, the American Council Psychological Examination, ranged from 90 to 149 during a recent year (119:511). This demonstrates the variability of American colleges. The Educational Testing Service reports similar results for its examination (452).

Furthermore, if the occupational research is accurate, a large proportion of those who expect to attend college do not possess the mental ability to do acceptable work, even in those schools at the lower end of the scale (376).

Wechsler (137:227-228) reports that "a number of studies would indicate that individuals with IQs below 110 have poor chances" to graduate from college in four years. Krech and Crutchfield (82:548) doubt that a person with an IQ below 100 will be able to matriculate and think it is unlikely that "a person with an IQ below 125 will succeed at a first-rate graduate school in any subject." Lovejoy (85:29) states that few students with IQs below 110 are even admitted to most accredited colleges.

A study using the Wechsler Adult Intelligence Scale (137:278) establishes 118 as the mean IQ for graduating seniors in a large state university. Plant and Richardson (374), in 1958, collected average IQ test scores from a number of colleges. The lowest reported mean was 109, the highest was 150. They estimate that the average freshman, if tested with the WAIS, would have an IQ of about 116. Lovejoy (85:29) feels the average college IQ is about 115. Either of these two estimates is a shift upward from 1938 when the freshman mean, in 355 colleges studies, was 108 (107:118).

Wechsler (137:228-229) emphasizes the importance of ability in college work and in vocational undertakings. "Competence in a given field," he states, "is determined by particular abilities and if an individual does not possess them to a sufficient degree, no amount of interest can compensate for a lack of them."

EVALUATION OF PREVIOUS RESEARCH

Our review of vocational literature has included over 400 pieces of research, most of them executed since 1945. The systematic investigation of occupational interests is still fairly young in comparison to other scientific undertakings; the first study cited in this review was published only 65 years ago. We would assume, therefore, that a number of deficiencies could be expected.

Semantic problems. Lindgren (332) has mentioned the difficulties which often arise regarding terminology, definitions, and nomenclature in the field of vocational guidance. The same problem characterizes research in this area; words which have definite meanings for a particular investigator often convey a different set of impressions to subjects in his experiment and another set of meanings to those who read his published material.

A prime example is the use of such terms as "vocational interests," "vocational development," and "vocational choice." These phrases often seem to be used interchangeably. If their use were restricted, however, these words could demonstrate greater utility.

The author sees a need for three somewhat different concepts in this area. One phrase, perhaps "vocational development," could refer to the continuing, ongoing process of growth during an individual's life--or at least those aspects of his life related to his occupation. Another phrase such as "vocational choice" would describe the real-life situation in which a person embarks upon a career. A person makes as many vocational choices during his life as he has jobs. A third phrase, probably "vocational interests," would symbolize the vocational preferences, inclinations, and activities of an individual, especially those preceding his vocational choice.

Super (125:218-219) has wisely divided vocational interests into four categories. A boy who says he is interested in science is stating an "expressed interest." When he spends an afternoon with his chemistry set, he is engaging in a "manifest interest." When he makes a high score on the scientific scale of the Kuder, he is demonstrating an "inventoried interest." Under experimental conditions, he is observed spending fifteen minutes skimming occupational information on chemistry and two minutes looking at a pamphlet about social work; these are "tested interests."

Super seems to make no provision for vocational interests which have a direct outlet in the individual's occupational life. What of the chemist who spends several hours each day in laboratory research? He may be vitally absorbed in this work and it may be an "interest" in every sense of the word. Perhaps a separate term, such as "operational interests," could be coined to account for these activities. Or perhaps these are another variety of manifest interests.

Vocational interests and vocational choice are both definite points in time. They might be thought of as landmarks in the whole panorama of vocational development. For this reason, they can be studied and recorded by "atomistic" methods, such as those investigations which tabulate the part-time jobs held by high school seniors or compute the SVIB scores for college freshmen. Expressed, manifest, and inventoried interests have all been studied in this manner.

Because vocational interests and the vocational choice are two somewhat distinct entities, we might ask if the association between them has been investigated. Could not vocational interest be thought of as a variable (such as intelligence or family background) which effects the ultimate choice of a job? Looking back upon our review of occupational literature, some research data concerning this relationship may be mentioned.

Fryer (263), in 1924, and Thorndike (129), in 1934, were early investigators of this problem. Studies concerning the relationship between expressed vocational interests and vocational choice have been made by Dyer (243), Little (333), Norton (363), Terman (156), and others. The association between inventoried interests and vocational choice has been investigated by McArthur (337; 338), Levine and Wallen (329), Mallison and Crumrine (342). Although the relationship is far from perfect, the general consensus is that vocational interests correlate more highly with vocational choice than do any other variable (123; 424).

A variety of related research projects should also be mentioned. The relationship between inventoried interests and expressed interests was studied by Terman (152:169) as well as Kopp and Tussing (314). Inventoried interests of adult workers were studied by Strong (123) in connection to the workers' vocational choice. Strong (123) has also compared inventoried interests of students with inventoried interests of the same people after they have worked for a number of years. Willett (464) and others have studied the constancy of students' expressed vocational interests.

Another semantic difficulty emerges when the instruments themselves are examined. Our review of occupational literature has already uncovered the differences elicited by the phraseology of various questionnaires.

When the subject is asked "What occupation do you want to enter?" he often gives a different response than when he is asked "What occupation do you expect to enter?" Jones (485:452) and Stephenson (415) find that students asked to state their preferences give far more unrealistic and illusory responses than when asked for their expectations.

A final observation regards comprehension of the questions by those being studied. Stefflre (412) has commented upon the reading level of interest inventories and the distortion of data which results when subjects have difficulty interpreting the test items. The Allport-Vernon Study of Values (455) was recently revised because high school students frequently had trouble understanding such terms as "altruistic," "quintessence," and "amelioration."

Etiological problems. The occupational literature reveals a plethora of definitions for the word "interest" and a great deal of speculation concerning its nature. The bulk of occupational research, however, has sought relationships between interests and some variable or another while the basic origins of vocational interests remained in doubt.

Many investigators have asked students to cite the sources of their vocational interests. A number of agents are listed but frequently the subjects express doubt, as to the most important factor (362). In addition to this problem, the approach is superficial as the etiology would be so complex, subtle, and far removed from present memory as to preclude its exposition by the subject.

Roe's investigation of early determinants (387) shows great promise but, perhaps, overlooks the later determinants of vocational interest during the critical years of middle childhood and adolescence.

Relations between vocational interests and such variables as occupational-educational experiences have been reported (498). This data is valuable as far as it goes but is of dubious help in ascertaining the original influences. Is a part-time modeling job in high school an etiological factor in a young girl's decision to become a professional model? Or is there a more basic determinant that encourages both the girl's decision to take the part-time job and her later decision to enter the field as a full-time model.

An association between carpal age and the level of vocational interest has been reported (508). Does this mean that boys will be influenced by their precocious wrist development to desire higher occupational level jobs? Or does it indicate that both phenomena are elements of maturity--a maturity fostered by other factors?

High school girls reporting the most favorable impressions about nursing from mass media are more likely to be those girls who choose nursing as a career (365). This could indicate that the mass media are influential in determining a vocational choice. It could mean that girls who are already inclined toward nursing evaluate a neutral stimulus in favorable terms because of their inclination. Or it could suggest that both factors operate concurrently.

Our present understanding seems to have advanced no further than the general premise that vocational interests emerge from both internal (genetic, hereditary) dispositions and external (environmental, experiential) conditions which are interrelated and work in concord (362; 387). Strong (123:139) describes the importance of acquiring a better understanding of interests and their etiology.

> It makes a great deal of difference in theorizing about interests whether one thinks interests are a reflection primarily of innate characteristics or of environmental factors. In the former case "discover" rather than learn may be the proper term--the boy discovers he likes to play with toy trucks, the girl with dolls. The more interests reflect innate rather than environmental factors the more stable interests should be. Actually little is known about the origin of interests and their stability; what is known is based on interest scores, which at best are only rough measurements.

Methodological problems. The studies reviewed seem to run the gamut of methodological approaches. Some are case studies of one person (73); others involve several thousand (323). Many investigators limit their work to a particular school (366); others investigate entire towns (86), states (333), or sample the whole nation (109).

A number of writers cite their general impressions from clinical work (15); others choose a representative sampling with meticulous care (67). Some report findings based on a simple tabulation of data (372) while other investigators use elaborate statistical techniques (493).

It is encouraging to see a number of approaches utilized but discouraging when studies neglect to mention the number of subjects, describe their environmental background, designate the instrument used, or delineate the experimental procedure.

Although polls and surveys are of great value and have a secure place in the field, useful data have been obtained by the employment of more intricate experimental techniques. Especially valuable has been information obtained by the use of correlation and analysis of variance.

In addition to statistical methods, the utilization of more complex tabulation systems has proved appropriate. For example, the two-dimensional classification method has given each job a designated "level" and "group." Roe (107) finds interests more closely related to group than to level. Fairweather (502) reports IQ scores related to level but not to group. Hyman (296) and others have established a close relationship between level (but not group) of students' occupational inclinations and their socio-economic background.

Another refinement has been pointed out by writers noting a fallacy in questioning a subject about his "vocational interest." Many occupational interests are held concurrently by most young people, yet this fact has been generally overlooked by investigators (363). Fruitful research results have been reported when the first, second, and third occupational preferences of subjects are requested (40:170).

One of the most encouraging methodological developments--and one of the most involved--has been the longitudinal study. Terman's follow-up investigations (155; 156; 157) have produced ample information concerning the educational and vocational interests of gifted children. Super (154) and Tiedeman (364) have recently embarked on research involving the vocational development of young boys which will continue for several years.

Theoretical problems. Vocational interests were being tabulated at the turn of the century but (with the exception of some psychoanalytical speculation) it was not until 1940 that vocational theory began to be systematically formulated (14; 124;402; 210). Darley and Hagenah (23:vi) describe the problem involved in reconciling theory with research.

> . . . those who write of theoretical problems in this area tend to be unfamiliar with the empiric results of vocational interest measurement, and those who present empirical data seem little interested or not adept in theoretical formulations. . . . Similarly, the number

> of factors that can in some way be found related to interest measurements understandably overwhelms the empiricist who trys to derive theory from his data. On the other hand those who start with a simple casual premise in theory do not then bother to encompass within this premise empiric results that stubbornly replicate themselves in the literature, and that do not conform to simple theoretical formulations.

A number of writers have proposed testable hypotheses derived from the theoretical material but only a few have conducted the suggested experiments.

Meadow (347) has proposed that psychoanalytic theory be examined. He asks if aggressive people tend to select competitive occupations (as many psychoanalysts claim); assumptions such as this could be experimentally studied.

A few independent investigations of Ginzberg's and Roe's theories have been attempted with mixed results (214; 290). Super's and Bordin's emphasis upon the importance of the self-concept has been justified by recent data (194; 393).

The practice of formulating testable hypotheses from theory and carrying out the proposed experiments would seem to be one of the more promising possibilities in this field.

A philosophical dilemma arises in regard to theoretical formulations. If the psychoanalytic writers are correct in assigning much vocational motivation to unconscious drives, if Roe's emphasis upon early determinants is well-taken, and if Ginzberg's and Super's developmental concepts are valid, what room does this leave for man's freedom of choice? When an individual chooses a career, is he a free agent or does this event only reflect one link in a predetermined chain?

The application of existential thought to psychology by Rollo May (512) has stressed man's freedom of choice and the responsibility he must take for his decisions. Stubbins (427), on the other hand, feels that the term "vocational choice" reflects incorrectly "the view that man is a free agent." He prefers to think of the event as an "outcome" rather than a "choice."

__Specific problems regarding the variables investigated.__ In surveying the mass of published research and the large number of variables investigated, Everett (501:80) concludes that " . . . most of the studies turn out to be conglomerations of empirical data, with little conceptual framework, and even less prior thinking through."

Although the author would not make such a sweeping indictment of the occupational literature, there are several specific shortcomings which can be briefly stated.

VOCATIONAL INTERESTS AND AGE: Instead of comparing fourth graders from one study with ninth graders from another to attempt an understanding of vocational development, it would be more accurate to compare the same individuals at different stages of their growth. There are too few longitudinal and follow-up studies in the accumulated literature.

It is also somewhat puzzling that fewer investigations are made of adults who have already made their occupational choice than of adolescents who have not. Additional data regarding workers and their change in interests would be of value.

VOCATIONAL INTERESTS AND SEX: A frequently used instrument is the masculinity-femininity scale. However, the results often vary, depending upon the particular scale used. Additional refinement of this device should be attempted as well as a more adequate explanation of what precise quantity the scale is trying to measure.

One of the most unfortunate situations in vocational research is the lack of attention given the vocational development of girls. Most of the high school and college data involve males only--despite the importance of the American woman's influence upon her family and her changing status in the occupational world. Of the three most widely-publicized research projects (154; 364; 387) now in process, not one investigates girls as well as boys.

VOCATIONAL INTERESTS AND INTELLIGENCE: Most of these studies, unfortunately, utilize group tests which are largely verbal in nature and which seem to favor children from the higher occupational classes. A greater use of non-verbal, "culture-free," and individually-administered tests might produce somewhat different--and more accurate--results.

VOCATIONAL INTERESTS AND FAMILY BACKGROUND. More than for most variables, the entire phenomenological field must be considered. The influence, for example, of paternal discipline can hardly be investigated adequately if the mother, siblings, and relatives living in the home are ignored. Yet, many studies in this area concentrate upon one element and ignore the rest. More encouraging is the work of Friend and Haggard (149) and Roe (387) which attempts to cover the total gestalt of home atmosphere and family membership.

VOCATIONAL INTERESTS AND OCCUPATIONAL-EDUCATIONAL EXPERIENCES: When the influence of extra-curricular activities, part-time work, and summer jobs is investigated, results are usually contradictory. The accumulated data show no general agreement. Continued research is needed, perhaps utilizing research designs which include additional variables.

There is a tendency in this area to ask a worker or college student to name his favorite summer job or high school activity and to attempt comparisons on this basis. To avoid inaccurate and incomplete reports based on recall, it would be more appropriate to record the occupational and educational experiences of high school students and follow them up as they enter college and their first job.

VOCATIONAL INTERESTS AND SOCIO-ECONOMIC FACTORS: Close relationships have been found between social class membership and the preferred level of occupation. Relatively little research has been done in terms of occupational groups. Hyman's data (296) suggest few differences in the percentages of people in different social classes entering occupations as measured by group; additional investigation along this line would be advisable.

VOCATIONAL INTERESTS AND PHYSIOLOGICAL CHARACTERISTICS: The few studies in this area have produced some surprisingly significant results. The question may be raised as to the genetic nature of the physiological variables studied. Such physiological characteristics as weight and general health depend to a large extent upon the environment of the child as well as his germ plasm.

Carter's investigation of fraternal and identical twins (161) has elicited provocative findings and should be repeated. Sheldon's high correlations (113) also need confirmation from independent sources.

VOCATIONAL INTERESTS AND PERSONALITY TRAITS: Striking results have been gained by utilizing personality inventories and questionnaires. The projective techniques, for the most part, have been neglected. They might be of assistance in assimilating data concerning the unconscious determinants of vocational choice. The Rorschach studies of Kaback (303) represent a pioneering effort in this field.

Many of the studies have established relationships between a specific vocation and a certain personality syndrome but have let the latter rest there. We should ask *why* career-oriented women have stronger needs for achievement (292). *Why* are eminent artists emotionally stable, while art students are frequently disturbed (242; 250)? *Why* do engineers and research scientists typically evince a lack of interest in people on personality measures (107:317)?

VOCATIONAL INTERESTS AND THE CULTURAL MILIEU: There are too few studies charting the influence of the historical era upon vocations. Those done during depression and wartime years indicate great changes in occupational interests and attitudes; additional research might uncover subtle influences in less cataclysmic periods. Most studies in the review of literature have been dated for this very reason--to enable the reader to judge if the final results could have been affected by the period of time during which the research was executed.

VOCATIONAL INTERESTS, PEERS, AND RECREATIONAL PURSUITS: Witty (522:18) has described televiewing as "children's favorite leisure pursuit." However, there are only a handful of studies dealing with the effect of television upon children's vocational and educational attitudes.

VOCATIONAL INTERESTS, SELF-CONCEPT, AND MOTIVES: One of the most recent areas to be investigated, this field holds more promise than most. A problem with the reported studies is the measurement of something so elusive as self-concept. This is one of the variables which should be placed in Tyler's category (132:358) of those quantities which must be given proper attention but which cannot yet be adequately measured. Perhaps more use could be made of Roger's Q-sort and Kelly's self-characterization techniques.

VOCATIONAL INTERESTS, RELIGION, AND VALUES: Unfortunately, the published research has failed to make an important distinction. Those who "grew up" with their religion are lumped with those who are converts or who "chose" their religious affiliation. The many similarities between occupational selection and choice (or lack of choice) of religious denomination suggest that investigation of this relationship might yield productive results.

VOCATIONAL INTERESTS, APTITUDE, AND SPECIAL ABILITIES: Once again, the lack of adequate instruments holds back progress in this area. Clerical and mechanical abilities have been thoroughly measured but what about social and executive aptitude?

Such studies as those by Kuder and Adkins (175), matching inventoried interests with a battery of aptitude tests, have been of great utility. It would be of value for someone to compare test scores with both inventoried and expressed interests for the same group to see which abilities correlate more closely with which type of interests.

Beyond this, additional variables should be added. Recent investigations of the joint influence of several variables (427; 298) have proved to be one of the most advantageous efforts in the field.

INTERPRETATION OF THE STUDIES: A final criticism would involve the interpretations made by some investigators of their results. Writers sometimes seem to take a smattering of information, drawn from a hundred or so test scores, and apply its implications to the assorted ills of all humanity.

Care must be taken in projecting results from a study beyond the group, or type of group, investigated. Data concerning lower socio-economic classes (497) would not easily apply to students from other backgrounds. Data involving gifted children (438) should not be generalized into curriculum suggestions for an entire school system.

In the final analysis, the application of experimental results is only utilitarian insofar as it affects the life of an individual. The advance of knowledge is of scholarly importance in a bound volume but it is not of humanistic value until it affects the student in the occupations course, the pupil in the guidance program, the soldier in the hospital, the worker in the personnel office, or the college graduate looking for a job.

The individual and his nature are too frequently forgotten as the counselor becomes absorbed in an abstract set of norms. From time to time, a boy or girl, man or woman, will come along who does not "fit" the norm; the guidance worker must take precautions that this person's needs are not overlooked because they lack prototypes in the accumulated research. Carl Jung (74:59) reminds us that " . . . the individual psyche, just because of its individuality, is an exception to the statistical rule and is therefore robbed of one of its main characteristics when subjected to the leveling influence of statistical evaluation." It would be an irony, indeed, if occupational research should prevent, instead of encourage, our consideration of individual differences.

> Let the child choose. Let us learn from his choices where his interests and talents lie in terms of what he is ready for, can use for growth at a given time, what his pace, potential, depth, and range are. He may need support and help in sustaining an interest, in developing the techniques he needs in order to carry it through. But if it is *his* interest, goal, longing, there will be an optimal chance for fullest growth of his potential capacity.
>
> Gardner Murphy and
> Lois Barclay Murphy
>
> *The Nation's Children*

CHAPTER III

THE CURRENT INVESTIGATION

The primary purpose of the present study is an attempt to answer five questions concerning the vocational and educational interests of junior high school students.

1.) What are the most frequently mentioned vocational preferences?

2.) What factors do the students perceive as influencing their preferences?

3.) In what work experiences have the students already participated?

4.) What are the students' future educational plans?

5.) What are the students' attitudes toward the courses in which they are currently enrolled?

A secondary purpose is the detection of any differences which might emerge as the data are divided according to sex, academic achievement, and mental ability.

THE MATERIALS USED, GROUP STUDIED, AND TECHNIQUE

The sample. The 162 girls and 189 boys investigated comprised, in 1958, the entire seventh and eighth grades of a large elementary school in Skokie, Illinois. Skokie might be described as an upper-middle class suburb of Chicago.

Many of the parents of the children studied are self-employed businessmen, executives, and professional people. Others are employed as skilled workers.

The higher-than-average socio-economic status of the group as well as its high scores on the academic achievement and mental ability tests preclude consideration of these girls and boys as "typical" representatives of the national junior high school population. Their mean IQ of 114, for example, is almost one standard deviation above that of the nation as a whole.

At the onset of the investigation, a school official informed the author that a large percentage of the student body represented the Jewish faith. Various writers (111; 422) have commented upon the vocational attitudes characteristic of many Americans with Jewish backgrounds. However, a comparison of the responses given by Jewish and non-Jewish children in the Skokie sample revealed no significant differences. Appendix B contains a complete description of this comparison.

The instruments. In gathering data for the present investigation, the author made use of a questionnaire (or interest inventory), a standardized academic achievement test, and a group test of mental ability.

THE QUESTIONNAIRE: The nature of interest has been discussed by many prominent writers (125 :218-219; 522:6-9).

Carter (161:258) mentions several methods of studying vocational interests. Among them are verbal responses, reactions to work projects, persistence in programs of training, and interest inventories. "While none of these," Carter states, "is a perfect indicator, the present trend seems to indicate the superiority of the interest inventory for the prediction of vocational satisfaction."

The first psychologist to work with interest inventories was James Miner of the Carnegie Institute of Technology in 1917 (14:217). He used these instruments to investigate the job interests of both Pittsburgh public school pupils and college students.

Inventories which measure expressed interests were compared with inventories measuring inventoried interests by Kopp and Tussing (314). Positive correlations averaging about .48 were established; the correlations were somewhat higher for boys than for girls. McArthur and Stevens (338) found expressed interests to be more accurate predictors of future vocations than inventoried interests. For the very high and the very low socio-economic groups, the latter were especially poor predictors.

Not all investigators have been satisfied with the interest inventory. Trow (448) criticizes the wording of questions which may influence pupils to give fantasy responses. He suggests asking "What will you probably do?" as well as "What would you like to do?" Stefflre (412) finds "considerable differences in reading difficulty" among the most commonly used inventories and states that reading errors often invalidate responses. Stefflre suggests that counselors "select the proper inventory only after estimating the reading skill of the client." Super (154) believes that structured interviews are more thorough and accurate indicators of vocational interests than are inventories.

In 1960 the Northwestern University School of Education released the results of a study undertaken with the assistance of the U. S. Office of Education (522). A series of interest inventories was designed for use in this study by Paul Witty and his associates. They covered four categories of children's interests: reading, television-radio-movies, play-recreation, and vocational-educational. Additional inventories were later given parents and teachers to record their reactions to children's televiewing habits. The project was carried out simultaneously in grades three through nine in several Chicago-area schools.

The current investigation analyzes a portion of the data procured in this study. Pupils' interests were surveyed by the previously mentioned vocational and educational questionnaire: The Northwestern University-U. S. Office of Education Interest Inventory Record, Form I, Part 4. Appendix C contains a copy of this instrument.

THE ACADEMIC ACHIEVEMENT TESTS: The questionnaires were administered in December, 1958. In October of that year the students had been given academic achievement and mental ability measures as part of the school's regular testing program.

The academic achievement measures used were the Iowa Every-Pupil Tests of Basic Skills (84). Bryan (478:33), in reviewing these tests, finds that "they are not concerned with the measurement of subject matter achievement as such" but rather the "educational growth in certain specific skills involved in learning."

> The tests are designed to measure and evaluate the pupil's functional mastery of a wide variety of critical skills involved in reading, work-study, language, and arithmetic. A detailed study of the tests gives the impression that, in general, the skills in each of these areas have been expertly analyzed and those that are crucial to total educational growth quite thoroughly sampled (478:41).

In 1960 a revision of the tests received similar acclaim from educators and psychologists.

THE MENTAL ABILITIES TEST: The students were given the Science Research Associates Primary Mental Abilities Tests, Ages 11 to 17 (131). The 1958 edition of this instrument was used.

Thurstone (442) developed the tests to provide more than " . . . a single index, such as the mental age (or) the intelligence quotient . . . for many educational purposes." Separate scores for verbal comprehension, word fluency, memory, numerical facility, spatial ability, reasoning, and perceptual speed can be computed as well as an average IQ score. High correlations of about .80 are reported between this instrument and the Stanford-Binet Scale (443).

Super (432), however, feels differently about the Primary Mental Abilities Tests.

> The original battery made a major contribution to research. . . . But the pioneer who blazes the trail and builds the first log cabin does not necessarily build a good house for the city which later develops around the site of his cabin. The SRA PMA Tests have proved most disappointing, and with the authors' lack of interest in validation, combined with their disregard of the criticisms which have for some time been made of this battery, do not make one optimistic for its future.

Bryan (478;41) suggests that the Iowa Every-Pupil Tests can be used for individual diagnosis. Super (432), on the other hand, refers to the Primary Mental Abilities Tests as "not suitable for use." The present investigation, fortunately, had no need to apply the PMA scores on an individual basis. Whatever the test's deficiencies for individual appraisal, it was decided that it would prove satisfactory in determining the high and the low IQ groups when the data were analyzed in these terms.

Procedure. The interest inventories were administered by the seventh and eighth grade classroom teachers as part of the Northwestern University-U. S. Office of Education project already mentioned. A school official released the Iowa Every-Pupil (IEP) and the Primary Mental Abilities (PMA) scores to the author. It was noted that a dozen students had been absent when the interest inventories were originally administered. The author supplied the school with these names and the classroom teachers had the students fill out the inventories during the month of March, 1959.

The data were tabulated by the author with the assistance of Miss Eva Bedenash, the Northwestern University-U. S. Office of Education project's secretary. Two copies of the results were made, one for use in the project, one for use in the current study.

CLASSIFICATION OF OCCUPATIONS: Remstad and Rothney (379) have demonstrated that the type of job classification system used can alter the results of a study. They state that the most widely used systems are the Minnesota Occupational Rating Scales classification, the Kuder Preference Record classification, and those proposed by the U. S. Employment Service (165:xix; 252) and by Anne Roe (107; 357; 385).

The need for a two-dimensional system prompted the author to adopt the Roe system for the current study. This system, described previously, classifies each occupation as to its "level" and its "group."

SOCIO-ECONOMIC CLASSIFICATION: In order for the author to analyze the data in terms of social class differences, a method of categorization was needed. Several writers (125:91; 281; 298; 375) have used the father's occupational level as a means of determining socio-economic status. Hyman (296) writes that when status is determined

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for research purposes, "the occupation seems generally agreed upon as the most satisfactory single index."

As the school records did not contain data concerning the father's occupation, this information was gleaned from questionnaire responses. One question asks, "What kind of work does your father do?" In most cases, the responses provided a clear enough answer so that the job could be classified as to its group and level.

Roe's system makes provision for six occupational levels but none of the jobs cited fell into the sixth, or lowest, category. This is not surprising as unskilled workers are quite uncommon in Skokie. Once again it is apparent that the sample investigated is not a "typical" one in terms of representing a cross-section of students from varied backgrounds.

STATISTICAL TECHNIQUES: In examining the relationship between socio-economic status and occupational preference, and in determining the extent of observed differences between girls and boys and between academic achievement and mental ability groups, several statistical methods were utilized.

The Pearson product-moment correlation coefficient as described by Edwards (32:147) was used in determining the degree of relationship between two variables. In addition, the rank correlation coefficient (32:194; 133:155) was adopted to study the relationship between ranked occupational groups.

The *t* test and the chi square test as described by Edwards (32:254, 367) were used to determine the significance of group differences. The *t* test was utilized to examine the difference between the means of two variables while the chi square test was employed to investigate differences among the number of responses falling into each of several categories. The Yates correction for continuity (32:383) was applied to the chi square formula when there was only one degree of freedom involved in the computation.

Edwards (32:384), Underwood (133:207), and other statisticians caution against using the regular chi square formula with small expected frequencies. When this situation arises, Edwards (32:384) advises use of the binomial expansion as described by Fisher (37:90-95). When dealing with small frequencies, the author employed both Fisher's formula and the tables published by Finney (253). For the other statistical computations, Edwards' tables (32:500-502) were used.

The author decided to check for statistical significance at the .01 and .05 levels of confidence. No findings below the .05 level were regarded as significant.

STANDARD DEVIATION GROUPS: When the data were examined for significant differences, the first step in the procedure was to compare girls' and boys' responses. The next step was the comparison of those making high scores on the IEP with those making low scores. The final computations involved repeating the process with high- and low-scoring PMA groups.

High and low IEP and PMA groups were established by finding the mean scores for both sexes and identifying those one standard deviation from the mean. Originally, some thought was given to making separate comparisons for seventh and eighth grade IEP and PMA groups. Only one significant difference, however, was found between the two grades (see Table XCVIII). Both grades were then combined so that each standard deviation group would be larger.

The IEP scores had to be adjusted so that seventh and eighth grade girls' and boys' scores could be combined without distorting the data. This was done by adding five months to each seventh grade score and subtracting five months from each eighth grade score. (IEP raw scores are converted to years and months to permit comparisons with a child's grade in school; ten months equals one school year.)

Appendix B contains a description of IEP and PMA scores for all 351 students. It also contains a listing of means and standard deviations for each grade, sex, and the total group.

When the IEP scores were adjusted, the mean girls' score was 8.7 with a standard deviation of 1.0. There were 30 girls in the high IEP group (with scores ranging from 9.7 to 11.0) and 26 girls in the low IEP group (with a range of 6.5 to 7.7).

The mean boys' IEP score was also 8.7 with a standard deviation of 1.0. There were 26 boys in the high IEP group (with a range of 9.7 to 11.0) and 43 boys in the low IEP group (with a range of 5.9 to 7.7).

The mean PMA score for the girls in the sample was 115.7 with a standard deviation of 14.4. There were 28 girls in the high PMA group (with an IQ range of 130 to 150) and 21 girls in the low PMA group (with a range of 80 to 101).

The mean boys' PMA IQ was 113.1 with a standard deviation of 14.2. There were 28 boys in the high PMA group (with a range of 127 to 150) and 36 boys in the low PMA group (with IQs ranging from 79 to 99).

It might be surmised that those in the high IEP group would also be in the high PMA group, and that the low groups would also overlap. This was not the case; the overlap proved to be less than 60 per cent.

1.) Of the 28 girls in the high PMA group, 16 were also in the high IEP group. One was in the low IEP group.

2.) Of the 28 boys in the high PMA group, 13 were also in the high IEP group. One was in the low IEP group.

3.) Of the 21 girls in the low PMA group, 11 were also in the low IEP group.

4.) Of the 36 boys in the low PMA group, 27 were also in the low IEP group.

Because the groups were somewhat different in their makeup, it was expected that their responses to items in the questionnaire might be significantly different. Furthermore, as the forthcoming comparisons will show, one of the instruments demonstrated far more variability between its standard deviation groups than did the other.

TABULATION METHODS: In presenting the data, percentages have been rounded off to the nearest tenth. Statistical analysis, however, was always done with the raw scores, not the percentages. Appendix A contains the samples' responses to each question in terms of raw scores (the number of students making each response) as well as percentages (rounded off to the nearest hundredth).

Each of the five questions posed at the beginning of this chapter is discussed in turn. The initial tables following each questionnaire item indicate the girls' and boys' responses. They are followed by additional tables dividing the responses into IKP and PMA standard deviation groups. The latter division is not made when there was no response to the item by the majority of the students falling into the standard deviation groups.

Brief discussions of the findings and comparisons with previous studies are attempted in this chapter. Final conclusions and implications, however, are postponed until the following chapter.

RESULTS

I. WHAT ARE THE MOST FREQUENTLY MENTIONED VOCATIONAL PREFERENCES?

Question 2A asks, "What kind of work do you want to do when you finish school?" The girls and boys investigated mentioned 60 different vocations. Table I includes a complete listing of these 60 preferences while Tables II and III contain the nine most frequently cited by each sex.

Table I categorizes the occupational preferences in terms of Roe's classification system. Job preferences are listed under their appropriate group; the occupational level is indicated in parentheses following each preference.

Problems regarding categorization are described in Appendix A. For example, all responses of "chemist" were placed under Group IV (Technology) and all responses of "scientist" under Group VI (Science). More descriptive responses might have altered this procedure as Roe assigns research chemists to Group VI (Science) and applied scientists to Group IV (Technology).

The girls' most favored vocations of "teacher," "secretary," and "nurse" are those which other investigators have also found to be typical of this age (67; 466; 522:78). The next two most frequently cited preferences of "airline stewardess" and "model" have surged in popularity during recent years (518). "Beautician" appeals to several girls in

TABLE I

GIRLS' AND BOYS' RESPONSES TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Response	Girls	Boys	Total
GROUP I: SERVICE			
Social worker (2)	0.6%	0.0%	0.3%
Speech therapist (2)	1.2	0	.6
Army officer (3)	0	.5	.3
Detective (3)	0	.5	.3
Air stewardess (4)	6.8	0	3.1
Beautician (4)	1.8	0	.8
Housewife (4)	3.1	0	1.4
Policeman (4)	0	1.1	.6
Sailor (4)	0	1.1	.6
Soldier; WAC (4)	.6	.5	.6
GROUP II: BUSINESS CONTACT			
Real estate agent (3)	0	1.1	.6
Salesman (3)	0	1.1	.6
Receptionist (4)	.6	0	.3
GROUP III: ORGANIZATION			
Business executive (2)	.6	4.2	2.6
Certified public accountant (2)	0	.5	.3
Accountant (3)	.6	1.1	.8
Bookkeeper (4)	0	.5	.3
Secretary (4)	11.7	0	5.4
GROUP IV: TECHNOLOGY			
Biologist (2)	.6	1.1	.8
Chemist (2)	.6	1.1	.8
Engineer (2)	0	11.6	6.3
Physicist (2)	0	.5	.3
Aviator; jet pilot (3)	0	5.8	3.1
Electronics worker (3)	0	1.1	.6
Carpenter (4)	0	.5	.3
Electrician (4)	0	1.1	.6
Mechanic (4)	0	2.1	1.1
Printer (4)	0	.5	.3
Housepainter (5)	0	.5	.3
Housecleaner (6)	0	.5	.3
GROUP V: OUTDOOR			
Rancher (2)	0	.5	.3
Farm owner (3)	0	1.1	.6
Forest ranger (3)	0	1.1	.6

TABLE I (CONTINUED)

Response	Girls	Boys	Total
GROUP VI: SCIENCE			
Astronomer (1)	0.0%	1.1%	0.6%
Doctor (1)	3.1	11.1	7.4
Dentist (2)	0	1.1	.6
Nurse (2)	9.9	0	4.6
Pharmacist (2)	0	1.1	.6
Scientist (2)	.6	7.9	4.6
Veterinarian (2)	.6	2.1	1.4
Laboratory technician (3)	.6	0	.3
GROUP VII: GENERAL CULTURAL			
Lawyer (2)	0	7.4	4.0
School teacher (2)	29.0	.5	13.7
Journalist (3)	1.2	1.1	1.1
GROUP VIII: ARTS & ENTERTAINMENT			
Actor; actress (1)	1.2	.5	.8
Author (1)	0	.5	.3
Creative artist (1)	.6	0	.3
Dancer (1)	1.2	0	.6
Instrumental musician (1)	0	1.1	.6
Singer (1)	.6	0	.3
Clothes designer (2)	3.1	0	1.4
Nightclub entertainer (2)	.6	0	.3
Professional athlete (2)	0	7.9	4.3
Writer (2)	.6	0	.3
Interior decorator (3)	.6	0	.3
Commercial artist (4)	0	.5	.3
Model (4)	5.6	0	2.6
Don't know	8.6	12.7	10.8
No response	3.1	2.1	2.6

TABLE II

GIRLS' NINE MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Response	Girls
School teacher	29.0%
Secretary	11.7
Nurse	9.9
Air stewardess	6.8
Model	5.6
Clothes designer	3.1
Doctor	3.1
Housewife	3.1
Beautician	1.8
Total	74.1

TABLE III

BOYS' NINE MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Response	Boys
Engineer	11.6%
Scientist*	11.6
Doctor	11.1
Professional athlete	7.9
Lawyer	7.5
Aviator; jet pilot	5.8
Business executive	4.2
Mechanic	2.1
Veterinarian	2.1
Total	63.9

*Includes the following responses: "astronomer," "biologist," "chemist," "physicist," "scientist" this and other studies (466).

The inclusion of "doctor" and "clothes designer" among the top nine is unique to this investigation. These responses may represent transitory interests based on particular units at school. On the other hand, they might represent a growing attraction of high-level lifetime careers for girls. "Housewife," representing the opposite pole of job orientation, received about as much attention as "doctor" or "clothes designer."

One out of every three boys in the current investigation selected the high-level occupations of "engineer," "scientist," or "doctor." Other high-level preferences ("lawyer," "business executive," "veterinarian") were also among the nine most popular. It becomes apparent that a greater proportion or boys in the Skokie sample are interested in these jobs than society has shown an ability to employ (47:332).

Other studies have also reflected the interest of junior high school boys in engineering (67; 466, 522:78). Professional sports and aviation rank high in this and other studies (322; 52:78). "Mechanic" is among the top nine vocations in the present investigation and has been cited by varying numbers of boys in other samples depending upon their socio-economic environment (466).

A somewhat larger number of girls (74 per cent) than of boys (64 per cent) is represented by the nine most popular preferences. This would seem to reflect Ginzberg's statement (46:252) that the range of vocational choice is more limited in the case of girls. In addition, girls mentioned 28 occupational preferences in comparison to 41 cited by boys.

In 1958 the Institute of Student Opinion (67) polled over 10,000 high school students. The results bear many resemblances to the preferences of the Skokie sample. For example, the three most popular girls' preferences are the same in both studies, although the Skokie girls listed "teacher" with greater frequency.

When the nine most popular jobs for the boys are compared, the two lists are identical with the exception of "farmer" and "teacher," which were mentioned by very few Skokie boys, and "professional athlete" which is not among the nine most often cited by the nation-wide sample. The latter sample represents both junior and senior high school students; as "professional athlete" declines in popularity during senior high school, we would not expect to see it on the list. Nor would farming, a field in which occupational inheritance is an important factor, be mentioned by many boys living in Skokie--a suburban community.

The almost total lack of interest in teaching among Skokie boys can be partially accounted for by their socioeconomic background. Woodring (145-163) writes that few boys whose fathers hold professional and business jobs become teachers. This would represent, for them, a step down the social ladder. On the other hand, girls from high-level backgrounds may enter the teaching profession, at least until marriage, without the move being considered a descent to lower status (145:163).

Tables IV and V summarize the occupational preferences for each sex. Group VII (General Cultural) was the most popular for girls, reflecting the interest in teaching. One half the boys in the Skokie sample preferred occupations in Groups IV (Technology) and VI (Science), reflecting their interests in medicine, engineering, and science. Jobs in Groups II (Business Contact) and V (Outdoor) were preferred by very few of either sex.

A glance at the summarized data for occupational levels indicates the interest in high-level jobs characteristic of both girls and boys in this study. The average occupational level for the girls' job preferences was 2.64; the boys' mean occupational preference level was 2.25. Table VI demonstrates that this difference is significant at the .05 level of confidence.

This finding is in line with the occupational situation in American society; working women generally hold lower-level jobs than do men. Furthermore, jobs offering high status rewards are more appealing to the American male than to the American female (458). A previous investigation by Terman (155:371) disclosed a significant difference when

TABLE IV

GIRLS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Classification		Girls
Group VII:	General Cultural	30.2%
Group VI:	Science	14.8
Group VIII:	Arts & Entertainment	14.2
Group I:	Service	14.2
Group III:	Organization	13.0
Group IV:	Technology	1.2
Group II:	Business Contact	.6
Group V:	Outdoor	0
Level 2		48.1
Level 4		30.3
Level 1		6.8
Level 3		3.1
Level 5; Level 6		0
Don't know		8.6
No response		3.1

TABLE V

BOYS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Classification		Boys
Group IV:	Technology	26.5%
Group VI:	Science	24.3
Group VIII:	Arts & Entertainment	10.6
Group VII:	General Cultural	9.0
Group III:	Organization	6.3
Group I:	Service	3.7
Group V:	Outdoor	2.7
Group II:	Business Contact	2.1
Level 2		47.6
Level 1		14.3
Level 3		12.2
Level 4		10.0
Level 5; Level 6		1.1
Don't know		12.7
No response		2.1

TABLE VI

COMPARISON OF GIRLS' AND BOYS' MEAN OCCUPATIONAL LEVELS IN REGARD TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Statistic	Girls	Boys
Mean occupational level	2.64	2.25
Standard deviation	1.44	1.37
t	2.407	
Confidence level	.05	

TABLE VII

COMPARISON OF GIRLS' AND BOYS' "DON'T KNOW" AND "NO RESPONSE" CATEGORIES IN REGARD TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Statistic	Girls	Boys
Don't know; no response	11.7%	14.1%
x^2	.709	
Confidence level	n.s.	

the occupational levels of gifted boys' preferences were compared with those of gifted girls. Cultural influences, therefore, have already had a measurable effect, by the junior high school years, upon the occupational level preferred by girls and boys.

Another sex difference sometimes reported is a tendency for boys to be more often vocationally undecided than girls (67:359; 490:308). In the present study, 13 per cent of the boys and nine per cent of the girls responded that they did not know what kind of work they wanted to do. In addition, about two per cent of each sex made no response to Question 2A. This difference, however, is not statistically significant (Table VII).

Tables VIII and IX list the occupational preferences for boys and girls scoring one standard deviation above and below the mean of their sex on the IEP academic achievement test. Although the data are listed in percentages, raw scores were used for all statistical comparisons.

The high-scoring girls mentioned 13 vocations, low-scoring girls mentioned eight. High-scoring boys cited 14, low-scoring boys 23. The author suspects that the wide range of occupations cited by the low IEP boys resulted from a variability in vocational realism; some chose high-level careers, others named jobs more appropriate to their ability. High IEP boys, for the most part, preferred vocations commensurate to their ability as reflected by the test scores.

TABLE VIII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
GROUP I: SERVICE				
Social worker (2)	3.3%	0.0%	0.0%	0.0%
Speech therapist (2)	3.3	0	0	0
Army officer (3)	0	0	3.2	0
Detective (3)	0	0	0	2.3
Air stewardess (4)	10.0	11.5	0	0
Housewife (4)	3.3	3.8	0	0
Soldier (4)	0	0	0	2.3
GROUP II: BUSINESS CONTACT				
Real estate agent (3)	0	0	0	2.3
Salesman (3)	0	0	0	2.3
GROUP III: ORGANIZATION				
Business executive (2)	0	0	0	4.6
Certified public acct. (2)	0	0	3.2	0
Accountant (3)	0	3.8	0	0
Secretary (4)	13.3	23.1	0	0
GROUP IV: TECHNOLOGY				
Chemist (2)	0	0	3.2	0
Engineer (2)	0	0	16.1	9.2
Physicist (2)	0	0	5.6	0
Aviator; jet pilot (3)	0	0	0	9.2
Electronics worker (3)	0	0	0	2.3
Carpenter (4)	0	0	0	2.3
Electrician (4)	0	0	0	2.3
Mechanic (4)	0	0	0	2.3
Housepainter (5)	0	0	0	2.3
Housecleaner (6)	0	0	0	2.3
GROUP V: OUTDOOR				
Farm owner (3)	0	0	0	2.3
Forest ranger (3)	0	0	3.2	2.3
GROUP VI: SCIENCE				
Doctor (1)	3.3	0	16.1	9.2
Dentist (2)	0	0	3.2	2.3
Nurse (2)	6.6	15.4	0	0
Pharmacist (2)	0	0	3.2	2.3
Scientist (2)	3.3	0	9.7	0
Veterinarian (2)	0	0	0	2.3

TABLE VIII (continued)

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
GROUP VII: GENERAL CULTURAL				
Lawyer (2)	0.0%	0.0%	9.7%	4.6%
School teacher (2)	36.6	15.4	0	0
Journalist (3)	3.3	0	3.2	0
GROUP VIII: ARTS & ENTERTAINMENT				
Actor (1)	0	0	3.2	0
Author (1)	3.3	0	0	0
Instrumental musician (1)	0	0	0	2.3
Professional athlete (2)	0	0	6.4	4.6
Interior decorator (3)	0	3.8	0	0
Model (4)	6.6	7.7	0	0
Don't know	3.3	15.4	9.7	16.2
No response	0	0	0	4.6

TABLE IX

IEP STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Classification	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Group I: Service	19.9%	15.3%	3.2%	4.6%
Group II: Business Contact	0	0	0	4.6
Group III: Organization	13.3	26.9	3.2	4.6
Group IV: Technology	0	0	24.9	32.2
Group V: Outdoor	0	0	3.2	4.6
Group VI: Science	13.2	15.4	32.2	16.1
Group VII: General Cultural	39.9	15.4	12.9	4.6
Group VIII: Arts & Entertainment	9.9	11.5	9.6	6.9
Level 1	6.6	0	19.3	11.5
Level 2	53.8	30.8	60.3	34.5
Level 3	3.3	7.6	9.6	18.4
Level 4	33.2	46.1	0	9.2
Level 5; Level 6	0	0	0	4.6
Don't know and no response	3.3	15.4	9.7	20.8

High IEP girls' favorite occupations were "teacher," "secretary," "airline stewardess," and "nurse," in that order. Low IEP girls preferred "secretary," "nurse," "teacher," and "airline stewardess."

High-scoring boys gave equal attention to "doctor" and "engineer." "Lawyer" and "scientist" tied for second place followed by "professional athlete" and "physicist." Boys in the low IEP group gave equal preference to "aviator," "doctor," and "engineer." There was a three-way tie for second place among careers in business, law, and professional sports.

An inspection of the summarized data in Table IX indicates that the mean occupational level of job preferences is higher for the high IEP girls (2.65) than for the low girls (3.14). The same observation can be made for the boys' groups (1.89 and 2.53). Table X demonstrates that only the boys' difference is significant (.05). This corroborates Jones' conclusion (485:454) that the relationship between occupational level and ability is higher for boys than for girls.

The large standard deviation for the low IEP boys (1.16) should be pointed out. Again, this may demonstrate the variability of the low-scoring boys, some choosing appropriate and some inappropriate vocational goals.

Table XI compares the vocationally undecided students in high and low IEP groups. Girls' and boys' percentages

TABLE X

COMPARISON OF MEAN OCCUPATIONAL LEVELS FOR IEP STANDARD DEVIATION GROUPS IN REGARD TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Statistic	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Mean occupational level	2.65	3.14	1.89	2.53
Standard deviation	1.04	.94	.57	1.16
t	1.748		2.749	
Confidence level	n.s.		.05	

TABLE XI

COMPARISON OF "DON'T KNOW" AND "NO RESPONSE" CATEGORIES FOR IEP STANDARD DEVIATION GROUPS IN REGARD TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Statistic	High IEP Girls and Boys	Low IEP Girls and Boys
Don't know; no response	6.6%	18.8%
x^2	7.816*	
Confidence level	.01	

*Fisher formula used.

were very similar and so the sexes were combined to provide for larger numbers in each chi square cell. Of the high IEP students, about seven per cent were vocationally undecided as compared with 19 per cent of the low IEP students. This difference is significant at the .01 confidence level. These results are similar to those reported by Obenchain (101).

Tables XII, XIII, and XIV depict the results of categorization according to educational and training requirements. Each occupation was categorized according to the standards described by Branche (13).

As Table XV demonstrates, 63 per cent of the high IEP girls selected occupations generally requiring three or more years of college. About 38 per cent of the low IEP girls preferred college occupations. This difference falls short of statistical significance.

In addition, there is no significant difference between the proportions of high-scoring girls (33 per cent) and low-scorers (46 per cent) preferring non-college occupations.

The reverse holds true for boys' IEP groups. Eighty-six per cent of the high group and 48 per cent of the low group preferred occupations generally requiring a college education. This difference is significant at the .01 confidence level.

Three per cent of the high-scoring boys and 30 per cent of the low-scoring boys were interested in non-college

TABLE XII

IEP STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO EDUCATIONAL REQUIREMENTS

Classification	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
OCCUPATIONS GENERALLY REQUIRING MORE THAN FOUR YEARS OF COLLEGE				
Chemist	0.0%	0.0%	3.2%	0.0%
Dentist	0	0	3.2	2.3
Doctor	3.3	0	16.1	9.2
Lawyer	0	0	9.7	4.6
Pharmacist	0	0	3.2	2.3
Physicist	0	0	5.6	0
Scientist	3.3	0	9.7	0
Social worker	3.3	0	0	0
Veterinarian	0	0	0	2.3
OCCUPATIONS GENERALLY REQUIRING THREE OR FOUR YEARS OF COLLEGE				
Accountant	0	3.8	0	0
Certified public accountant	0	0	3.2	0
Engineer	0	0	16.1	9.2
Forest ranger	0	0	3.2	2.3
Interior decorator	0	3.8	0	0
Nurse	6.6	15.4	0	0
School teacher	36.6	15.4	0	0
Speech therapist	3.3	0	0	0
OCCUPATIONS FREQUENTLY REQUIRING THREE OR FOUR YEARS OF COLLEGE				
Actor	0	0	3.2	0
Author	3.3	0	0	0
Business executive	0	0	0	4.6
Detective	0	0	0	2.3
Instrumental musician	0	0	0	2.3
Journalist	3.3	0	3.2	0
Professional athlete	0	0	6.4	4.6
Real estate agent	0	0	0	2.3

TABLE XIII

IEP STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO TRAINING REQUIREMENTS

Classification	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
OCCUPATIONS GENERALLY REQUIRING TRADE SCHOOL OR TRAINING PROGRAM				
Air stewardess	10.0%	11.5%	0.0%	0.0%
Aviator; jet pilot	0	0	0	9.2
Army officer	0	0	3.2	0
Electronics worker	0	0	0	2.3
Model	6.6	7.7	0	0
Salesman	0	0	0	2.3
Secretary	13.3	23.1	0	0
OCCUPATIONS GENERALLY REQUIRING APPRENTICESHIP OR ON-THE-JOB TRAINING				
Carpenter	0	0	0	2.3
Electrician	0	0	0	2.3
Farm owner	0	0	0	2.3
Housepainter	0	0	0	2.3
Mechanic	0	0	0	2.3
OCCUPATIONS HAVING NO MINIMUM TRAINING REQUIREMENT				
Housecleaner	0	0	0	2.3
Housewife	3.3	3.8	0	0
Soldier	0	0	0	2.3

TABLE XIV

SUMMARY OF IEP STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO EDUCATIONAL AND TRAINING REQUIREMENTS

Classification	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
More than four years of college	9.9%	0.0%	50.7%	20.7%
Three or four years of college	53.1	38.4	35.3	27.6
Trade school or training program	29.9	42.3	3.2	13.8
Apprentice or on-the-job training	0	0	0	11.5
No minimum training requirements	3.3	3.8	0	4.6

TABLE XV

COMPARISON OF OCCUPATIONAL PREFERENCES CLASSIFIED AS TO EDUCATIONAL REQUIREMENTS AND PROFESSIONAL FIELD FOR IEP STANDARD DEVIATION GROUPS

Statistic	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
College generally required	63.0%	38.4%	86.0%	48.3%
Computed X^2	3.518		8.750	
Confidence level	n.s.		.01	
College not generally required	33.2%	46.1%	3.2%	29.9%
Computed X^2	.583		6.895	
Confidence level	n.s.		.01	
Occupations in education	43.2%	15.4%	0.0%	0.0%
Computed X^2	5.259		0.000	
Confidence level	.05		n.s.	
Occupations in engineering	0.0%	0.0%	16.1%	9.2%
Computed X^2	0.000		1.314	
Confidence level	n.s.		n.s.	
Occupations in medicine	9.9%	15.4%	22.5%	16.1%
Computed X^2	.016		.516	
Confidence level	n.s.		n.s.	
Occupations in science	3.3%	0.0%	18.5%	0.0%
Computed X^2	.015		9.231	
Confidence level	n.s.		.01	

jobs. This difference is also significant (.01).

These findings are reminiscent of Tyler's (449). Interests and activities were associated with mental ability in the case of first grade boys but not first grade girls. Tyler concluded that ability is a more important factor in the determination of male interests, a conclusion which seems to be supported by the present data.

The similarity, admittably, is a tenuous one. Tyler compared the play activities and mental ability scores of first graders. The current study compares the vocational interests and academic achievement scores of junior high school students. Nevertheless, the resemblance of these results should be kept in mind as additional data from the present investigation are examined.

Table XVI presents an additional categorization of occupational preferences. Responses were grouped into educational, engineering, medical, and scientific fields. These four fields have been the subject of a number of investigations regarding occupational stereotypes (108:165; 184; 233; 346; 495).

The medical profession has a high-prestige, high-status, high-income stereotype (495). Doctors and physicians appear at the apex of occupational status rankings for both men's and women's jobs (184; 233). Registered nurses also have a favorable stereotype and are third from the top in status ratings (184). Engineers are also thought to earn

TABLE XVI

IEP STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO PROFESSIONAL FIELD

Classification	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
OCCUPATIONS IN EDUCATIONAL FIELDS				
School teacher	36.6%	15.4%	0.0%	0.0%
Social worker	3.3	0	0	0
Speech therapist	3.3	0	0	0
OCCUPATIONS IN ENGINEERING FIELDS				
Engineer	0	0	16.1	9.2
OCCUPATIONS IN MEDICAL FIELDS				
Dentist	0	0	3.2	2.3
Doctor	3.3	0	16.1	9.2
Nurse	6.6	15.4	0	0
Pharmacist	0	0	3.2	2.3
Veterinarian	0	0	0	2.3
OCCUPATIONS IN SCIENTIFIC FIELDS				
Chemist	0	0	3.2	0
Physicist	0	0	6.5	0
Scientist	3.3	0	9.7	0

high salaries and are fifth from the top in status rank (233).

On the other hand, the teaching profession is generally considered to be poorly paid. Elementary school teachers are eleventh from the top of the list in status ratings (184). The stereotype of scientists also carries certain unfavorable connotations; in some studies, students describe them as "odd," "dull," and "evil" (104:165; 346).

All four of these professions are associated with intelligence and the need for specialized training. However, the stereotypes of teachers and scientists contain more unfavorable elements than do the stereotypes of doctors and engineers.

When the high and low IEP groups were compared, there were no significant differences between the percentages of high- and low-scoring students preferring medicine and engineering (Table XV). Significantly, more high-scorers, however, were interested in education and science.

Of the high IEP girls, 43 per cent preferred careers in education as opposed to 15 per cent of the low girls, a significant (.05) difference. Of the high-scoring boys, 18 per cent were interested in scientific occupations. None of the low-scorers were scientifically inclined and the difference is significant (.01). A small quantity (one per cent) was assigned to the low IEP group to enable statistical computations to be made.

When careers in engineering were examined, 16 per cent of the high IEP boys and nine per cent of the low boys were interested. This difference is not significant.

Of the high IEP boys, 22 per cent preferred careers in medicine as opposed to 16 per cent of the low group. Ten per cent of the high-scoring girls and 15 per cent of the low-scorers selected medical careers. Neither of these differences is significant.

An examination of the data suggests that more high-scoring girls responded "doctor" and more low-scoring girls responded "nurse." There were not sufficient data to make an adequate comparison of these replies. Nor were there sufficient numbers to compare boys' responses to "lawyer" and "business executive" although no trend was apparent that might have led to significant differences between high- and low-scorers. In addition, boys' teaching interests and girls' preferences for engineering and science could not be adequately compared on the basis of this sample's responses.

In conclusion, ability (as measured by the IEP) does not seem to be an influential determinant of preference for medical or engineering vocations for the Skokie sample. Yet there are significant ability differences for teaching and scientific interests. It will be noted that the two fields with the most favorable occupational stereotypes are those fields in which IEP scores do not discriminate between interested students. Perhaps a student must possess high degrees of ability and interest in teaching and science which compensate for the reported disadvantages of these professions.

In any event, it seems that the higher a professional occupation is perceived by junior high school students to rank in social rewards, the higher is the percentage of low-ability students among those who prefer it. The lower a professional occupation is perceived to rank in status rewards, the fewer low-ability students who will prefer it. This hypothesis could be tested by further research on a larger and more representative sample.

If the hypothesis is confirmed, the explanation would probably involve the dichotomy between extrinsic and intrinsic rewards. Education and science are possibly perceived as offering fewer extrinsic rewards than medicine and engineering. Students who want to become teachers and scientists, therefore, would be drawn to those fields primarily by the nature of the work itself.

These results are similar to those reported by Moser (358). He compared high school students' IQs with their vocational interests and found the mean IQs of those preferring medical careers (as dentists, doctors, and nurses), to center around 100. The highest mean was 114 which characterized those students inclined toward teaching.

IQ differences for the Skokie sample become apparent when the PMA data are scrutinized. Table XVII records the occupational preferences for boys and girls scoring one

TABLE XVII

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
GROUP I: SERVICE				
Speech therapist (2)	3.6%	0.0%	0.0%	0.0%
Detective (3)	0	0	0	2.8
Air stewardess (4)	3.6	9.5	0	0
Beautician (4)	0	4.8	0	0
Housewife (4)	0	4.8	0	0
Sailor (4)	0	0	0	2.8
Soldier (4)	0	0	0	2.8
GROUP II: BUSINESS CONTACT				
Real estate agent (3)	0	0	3.6	2.8
Salesman (3)	0	0	0	2.8
GROUP III: ORGANIZATION				
Business executive (2)	0	0	3.6	8.3
Certified public acct. (2)	0	0	3.6	0
Accountant (3)	0	4.8	3.6	0
Secretary	10.7	9.5	0	0
GROUP IV: TECHNOLOGY				
Chemist (2)	0	0	7.1	0
Engineer (2)	0	0	10.7	5.6
Aviator; jet pilot (3)	0	0	3.6	11.1
Electronics worker (3)	0	0	0	2.8
Electrician (4)	0	0	0	2.8
Mechanic (4)	0	0	3.6	2.8
Housecleaner (6)	0	0	0	2.8
GROUP V: OUTDOOR				
Farm owner (3)	0	0	0	2.8
Forest ranger (3)	0	0	0	2.8
GROUP VI: SCIENCE				
Doctor (1)	3.6	0	10.7	13.9
Dentist (2)	0	0	3.6	2.8
Nurse (2)	3.6	23.8	0	0
Pharmacist (2)	0	0	3.6	0
Scientist (2)	7.1	0	10.7	0
Veterinarian (2)	0	0	3.6	0

TABLE XVII (continued)

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
GROUP VII: GENERAL CULTURAL				
Lawyer (2)	0.0%	0.0%	7.1%	2.8%
School teacher (2)	35.7	23.8	0	0
GROUP VIII: ARTS & ENTERTAINMENT				
Artist (1)	3.6	0.0	0.0	0.0
Author (1)	0	0	0	2.8
Clothes designer (2)	3.6	0	0	0
Professional athlete (2)	0	0	7.1	2.8
Model (4)	7.1	0	0	0
Don't know	14.3	14.3	10.7	13.9
No response	3.6	4.8	3.6	5.6

standard deviation above and below their sex's mean on the Primary Mental Abilities test. As the mean IQ for the group is 114, most of those in the low groups have IQs below 100; high groups include those with IQs above 128.

The high PMA girls selected ten occupations while the low PMA girls named seven. The high and low PMA boys selected 16 and 20, respectively. As was true of the IEP groups, the low-scoring girls named fewer and the low-scoring boys named more occupations than the high-scorers of their sex.

The high girls' group listed "secretary," "teacher," "model," and "scientist" most frequently. The low group cited "nurse," "teacher," "airline stewardess," and "secretary."

The high PMA boys preferred occupations in engineering, medicine, and science; the low boys' favorites were "aviator," "business executive," and "doctor."

Table XVIII summarizes the data for both sexes. The difference between the mean occupational level is significant (.05) for the boys but not for the girls. There is no significant difference between high- and low-scoring students regarding vocational indecision (Table XX).

Tables XXI, XXII, and XXIII categorize the responses as to their educational and training requirements. Once again, significantly (.05) more high-scoring boys prefer college careers than low-scorers. Significantly (.01) more

TABLE XVIII

PMA STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Classification		High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Group I:	Service	7.2%	19.1%	0.0%	8.4%
Group II:	Business Contact	0	0	3.6	5.6
Group III:	Organization	10.7	14.3	10.8	8.3
Group IV:	Technology	0	0	25.0	27.1
Group V:	Outdoor	0	0	0	5.6
Group VI:	Science	13.3	23.8	32.2	16.7
Group VII:	General Cultural	35.7	23.8	7.1	2.8
Group VIII:	Arts & Entertainment	14.3	0	7.1	5.6
Level 1		7.2	0	10.7	16.7
Level 2		53.6	47.6	60.7	22.3
Level 3		0	4.8	10.8	27.9
Level 4		21.4	28.6	3.6	11.2
Level 5; Level 6		0	0	0	2.8
Don't know and no response		17.9	19.1	14.3	19.5

TABLE XIX

COMPARISON OF MEAN OCCUPATIONAL LEVELS FOR PMA STANDARD DEVIATION GROUPS IN REGARD TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Statistic	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Mean occupational level	2.43	2.76	2.08	2.65
Standard deviation	.99	.97	.65	1.18
t	1.071		2.167	
Confidence level	n.s.		.05	

TABLE XX

COMPARISON OF "DON'T KNOW" AND "NO RESPONSE" CATEGORIES FOR PMA STANDARD DEVIATION GROUPS IN REGARD TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Statistic	High PMA Girls and Boys	Low PMA Girls and Boys
Don't know; no response	16.1%	19.3%
X^2	.428	
Confidence level	n.s.	

TABLE XXI

PMA STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO EDUCATIONAL REQUIREMENTS

Classification	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
OCCUPATIONS GENERALLY REQUIRING MORE THAN FOUR YEARS OF COLLEGE				
Chemist	0.0%	0.0%	7.1%	0.0%
Dentist	0	0	3.6	2.8
Doctor	3.6	0	10.7	13.9
Lawyer	0	0	7.1	2.8
Pharmacist	0	0	3.6	0
Scientist	7.1	0	10.7	0
Veterinarian	0	0	3.6	0
OCCUPATIONS GENERALLY REQUIRING THREE OR FOUR YEARS OF COLLEGE				
Accountant	0	4.8	3.6	0
Certified public accountant	0	0	3.6	0
Clothes designer	3.6	0	0	0
Engineer	0	0	10.7	5.6
Forest ranger	0	0	0	2.8
Nurse	3.6	23.8	0	0
School teacher	35.7	23.8	0	0
Speech therapist	3.6	0	0	0
OCCUPATIONS FREQUENTLY REQUIRING THREE OR FOUR YEARS OF COLLEGE				
Artist	3.6	0	0	0
Author	0	0	0	2.8
Business executive	0	0	3.6	8.3
Detective	0	0	0	2.8
Professional athlete	0	0	7.1	2.8
Real estate agent	0	0	3.6	2.8

TABLE XXII

PMA STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO TRAINING REQUIREMENTS

Classification	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
OCCUPATIONS GENERALLY REQUIRING TRADE SCHOOL OR TRAINING PROGRAM				
Air stewardess	3.6%	9.5%	0.0%	0.0%
Aviator; jet pilot	0	0	3.6	11.1
Beautician	0	4.8	0	0
Electronics worker	0	0	0	2.8
Model	7.1	0	0	0
Salesman	0	0	0	2.8
Secretary	10.7	9.5	0	0
OCCUPATIONS GENERALLY REQUIRING APPRENTICESHIP OR ON-THE-JOB TRAINING				
Electrician	0	0	0	2.8
Farm owner	0	0	0	2.8
Mechanic	0	0	3.6	2.8
OCCUPATIONS HAVING NO MINIMUM TRAINING REQUIREMENT				
Housecleaner	0	0	0	2.8
Housewife	0	4.8	0	0
Sailor	0	0	0	2.8
Soldier	0	0	0	2.8

TABLE XXIII

SUMMARY OF PMA STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO EDUCATIONAL AND TRAINING REQUIREMENTS

Classification	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
More than four years of college	10.7%	0.0%	46.4%	19.5%
Three or four years of college	49.8	52.4	32.2	27.9
Trade school or training program	21.4	23.8	3.6	16.7
Apprenticeship or on-the-job training	0	0	3.6	8.4
No minimum training requirement	0	4.8	0	8.4

low-scoring boys prefer non-college careers than high-scorers. As was true with the IEP groups, neither of these differences is significant when the girls' groups are compared.

When occupational preferences are categorized into educational, engineering, medical, and scientific fields (Table XXV), no significant differences appear between high and low groups regarding the first three types of jobs. However, significantly more (.05) of the high PMA boys show scientific interests than low PMA boys (Tables XXIV and XXV).

In reviewing the PMA data, two major deviations from the IEP results are noted. The PMA scores do not discriminate between girls interested in teaching as did the IEP scores. Most of the IEP differences which were significant at the .01 confidence level are significant at the .05 level for the PMA groups.

Several factors may account for this. The PMA measures potential ability somewhat more than does the IEP. The latter instrument is designed to measure achievement in specific academic skills. This type of ability may be of greater import to vocational and educational interests than the former type of ability.

It must also be remembered that the IEP has won greater acclaim as a precise scientific instrument than has the PMA (432; 478).

In surveying the responses to Question 2A, a query might be made as to the appropriateness of the pupils'

TABLE XXIV

COMPARISON OF OCCUPATIONAL PREFERENCES CLASSIFIED AS TO EDUCATIONAL REQUIREMENTS AND PROFESSIONAL FIELD FOR PMA STANDARD DEVIATION GROUPS

Statistic	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
College generally required	60.5%	52.4%	78.6%	47.4%
Computed X^2	.079		5.252	
Confidence level	n.s.		.05	
College not generally required	21.4%	28.6%	7.2%	33.3%
Computed X^2	.054		6.949	
Confidence level	n.s.		.01	
Occupations in education	39.3%	23.8%	0.0%	0.0%
Computed X^2	2.255		0.000	
Confidence level	n.s.		n.s.	
Occupations in engineering	0.0%	0.0%	10.7%	5.6%
Computed X^2	0.000		.411	
Confidence level	n.s.		n.s.	
Occupations in medicine	7.2%	23.8%	21.5%	16.7%
Computed X^2	2.553		.010	
Confidence level	n.s.		n.s.	
Occupations in science	7.1%	0.0%	17.8%	0.0%
Computed X^2	.054		5.301	
Confidence level	n.s.		.05	

TABLE XXV

PMA STANDARD DEVIATION GROUPS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO PROFESSIONAL FIELD

Classification	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
OCCUPATIONS IN EDUCATIONAL FIELDS				
School teacher	35.7%	23.8%	0.0%	0.0%
Speech therapist	3.6	0	0	0
OCCUPATIONS IN ENGINEERING FIELDS				
Engineer	0	0	10.7	5.6
OCCUPATIONS IN MEDICAL FIELDS				
Dentist	0	0	3.6	2.8
Doctor	3.6	0	10.7	13.9
Nurse	3.6	23.8	0	0
Pharmacist	0	0	3.6	0
Veterinarian	0	0	3.6	0
OCCUPATIONS IN SCIENTIFIC FIELDS				
Chemist	0	0	7.1	0
Scientist	7.1	0	10.7	0

preferences. Several insights into this problem may be gleaned from the data.

Many writers (82:548; 85:29; 137:227-228) have expressed doubt that students with IQ's below 110 have the aptitude for college work at most institutions. All members of the low PMA groups have IQ's far below 110. However, 52 per cent of the low PMA girls and 47 per cent of the low PMA boys have selected occupations requiring a college education.

Previously cited studies (396; 417) have indicated that professional groups have mean IQ's far above the average range. In one study (396), doctors and engineers had mean IQ's of 132 and 133. Nevertheless, 22 per cent of the low PMA boys have selected medicine and engineering.

Another measure of occupational realism can be observed by matching the percentage of students interested in an occupation with the percentage of adults actually engaged in that type of work. For example, less than ten per cent of the working population are employed in professional occupations (47:332), yet over 50 per cent of the Skokie sample want to enter these fields.

Recent U. S. Census Bureau figures (13; 47:332-356) are compared with responses to Question 2A in Table XXVI. The occupational preferences which are most out of proportion to the number presently employed are in the fields of acting, aviation (pilots and stewardesses), clothes designing, engineering, law, medicine (doctors and nurses), modeling,

TABLE XXVI

SELECTED GIRLS' AND BOYS' OCCUPATIONAL PREFERENCES COMPARED WITH PERCENTAGES OF ADULT WORKERS EMPLOYED IN THOSE OCCUPATIONAL FIELDS

Occupation	Girls and Boys	Adult workers
Accountant; C.P.A.	1.1%	0.6%
Actor; actress	.8	.1-
Artist	.3	.1-
Aviator; jet pilot; air stewardess	6.2	.1-
Business executive	2.6	3.3
Carpenter	.3	.2
Chemist; physicist; scientist	7.1	.4
Clothes designer	1.4	.1-
Dentist	.6	.1-
Doctor	7.4	.1-
Electrician	.6	.8
Engineer	6.3	.2
Farm owner	.9	.8
House painter	.3	.7
Lawyer	4.0	.3
Mechanic	1.1	2.9
Musician	.6	.2
Nurse	4.6	.6
Pharmacist	.6	.2
Professional athlete	4.3	.1-
Salesman	.6	6.7
Secretary	5.7	2.5
School teacher	13.7	2.2
Veterinarian	1.4	.1-
Total	72.5	23.4-

science (chemists and physicists), and professional sports. Over seven times as many students are interested in these vocations as there are adults presently holding jobs in these fields.

Out of proportion to a smaller degree are jobs in art, teaching and music. Preferences which are fairly well in line with the current employment pattern are "accountant," "businessman," "mechanic," "salesman," and "secretary."

A wide gap exists between openings in semi-skilled and unskilled jobs and the Skokie sample's responses. Such other vocations as architect, clergyman, and college professor are completely ignored.

This situation is not typical of the nation as a whole because the Skokie sample is not a representative one. Coming from a higher-than-average social and economic background and receiving higher-than-average IQ scores, these students would hardly be expected to show much interest in low-level occupations.

In addition, comparisons of this nature often neglect to consider such factors as occupational shortages and future growth in certain fields. Although a larger percentage of the Skokie girls is interested in education than there are teachers currently employed, the nation-wide demand in this field is still unfilled. The increasing number of job openings in scientific and technical fields somewhat compensates for the Skokie boys' over-selection of these occupations.

Nevertheless, it is apparent that many of the overselected vocations are those which occupational stereotype research has identified as ranking high in "prestige" or "glamour" considerations. One might arbitrarily identify many of the vocations mentioned in response to Question 2A as "prestige careers." These would include, for the girls, "business executive," "doctor," and "nurse"; for the boys, "business executive," "dentist," "doctor," "engineer," and "lawyer." Fourteen per cent of the girls and 35 per cent of the boys expressed interest in these occupations (Table I).

Another arbitrary categorization, based upon the general research findings of occupational stereotyping, would place several jobs in the "glamour" area. These would be, for the girls, "actress," "airline stewardess," "artist," "beautician," "dancer," "clothes designer," "interior decorator," "model," "nightclub entertainer," "singer," and "writer"; for the boys, "actor," "army officer," "aviator," "author," "detective," "jet pilot," "musician," and "professional athlete." Twenty-six per cent of the girls and 17 per cent of the boys selected these occupations (Table I).

It is apparent that a somewhat larger number of boys than of girls selected those fields in which status rewards are high but in which openings are generally rare. Forty per cent of the girls and 52 per cent of the boys named "prestige" and "glamour" occupations. When these proportions are compared, the chi square is 5.223 which attains significance at the .05 level of confidence. These findings cannot be considered conclusive because the categorization was not based on a well-defined classification system. Nevertheless, they are in line with those of other investigators (148:50; 359) who have found girls' occupational preferences to be in closer accord with society's demands than those of boys.

On the other hand, ability and aptitude are more closely related to vocational interests in the case of Skokie boys. This sex difference has been repeatedly demonstrated by the IEP and PMA comparisons.

It might be concluded that girls' preferences bear a closer association with actual job opportunities, that boys' preferences are more closely related to their abilities, and that large numbers of both sexes harbor unrealistic vocational plans.

Questions 2C and 2D ask, "If you were not able to follow your first choice of work, what would be your second choice? Your third choice?" Tables XXVII and XXVIII list the six most frequently mentioned preferences for each sex, and Tables XXIX, XXX, XXXI, and XXXII categorize all the responses as to their occupational group and level.

For both questions, about half the sample did not respond, curtailing the value of the replies. The author suspects that many failed to respond because they had given

TABLE XXVII

GIRLS' AND BOYS' SIX MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES IN RESPONSE TO QUESTION 2C, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE YOUR SECOND CHOICE?"

Response	Girls	Response	Boys
Model	5.6%	Engineer	4.2%
Secretary	5.6	Professional athlete	4.2
Nurse	4.9	Doctor	3.2
School teacher	3.7	Scientist	3.2
Air stewardess	3.1	Aviator	2.1
Clothes designer	1.8	Lawyer	2.1
Total	24.7	Total	19.0

TABLE XXVIII

GIRLS' AND BOYS' SIX MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES IN RESPONSE TO QUESTION 2D, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE...YOUR THIRD CHOICE?"

Response	Girls	Response	Boys
Secretary	8.0%	Engineer	3.2%
School teacher	5.6	Professional athlete	3.2
Housewife	4.3	Scientist	3.2
Model	2.5	Aviator	2.6
Air stewardess	1.8	Business executive	2.6
Nurse	1.8	Lawyer	1.1
Total	24.0	Total	15.9

TABLE XXIX

GIRLS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2C, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE YOUR SECOND CHOICE?"

Classification		Girls
Group VIII:	Arts and Entertainment	13.5%
Group I:	Service	8.0
Group VI:	Science	6.1
Group III:	Organization	5.5
Group VII:	General Cultural	3.7
Group II:	Business Contact	1.2
Group V:	Outdoor	0
Group IV:	Technology	0
Level 4		17.2
Level 2		13.5
Level 1		4.9
Level 3		1.8
Level 5; Level 6		.6
Don't know		5.5
No response		56.1

TABLE XXX

BOYS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2C, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE YOUR SECOND CHOICE?"

Classification		Boys
Group VIII:	Arts and Entertainment	11.2%
Group IV:	Technology	9.6
Group VI:	Science	8.4
Group VII:	General Cultural	4.2
Group III:	Organization	3.2
Group II:	Business Contact	1.6
Group I:	Service	1.6
Group V:	Outdoor	.5
Level 2		18.0
Level 3		9.5
Level 1		8.5
Level 4		3.2
Level 5; Level 6		1.1
Don't know		5.8
No response		53.9

TABLE XXXI

GIRLS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2D, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE...YOUR THIRD CHOICE?"

Classification		Girls
Group III:	Organization	8.0%
Group VIII:	Arts and Entertainment	6.8
Group VII:	General Cultural	6.8
Group I:	Service	6.8
Group VI:	Science	3.7
Group II:	Business Contact	0
Group V:	Outdoor	0
Group IV:	Technology	0
Level 4		16.7
Level 2		9.3
Level 1		4.9
Level 3		1.2
Level 5; Level 6		0
Don't know		3.1
No response		64.8

TABLE XXXII

BOYS' OCCUPATIONAL PREFERENCES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2D, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE...YOUR THIRD CHOICE?"

Classification		Boys
Group IV:	Technology	7.9%
Group VIII:	Arts and Entertainment	5.8
Group VI:	Science	4.2
Group III:	Organization	3.7
Group VII:	General Cultural	2.7
Group I:	Service	2.1
Group V:	Outdoor	1.6
Group II:	Business Contact	0
Level 2		15.3
Level 3		6.9
Level 4		2.6
Level 1		2.1
Level 5; Level 6		1.1
Don't know		3.7
No response		67.7

TABLE XXXIII

COMPARISON OF GIRLS' AND BOYS' MEAN OCCUPATIONAL PREFERENCE LEVELS IN REGARD TO QUESTIONS 2A ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), 2C, AND 2D ("IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE YOUR SECOND CHOICE? YOUR THIRD CHOICE?")

Statistic	Girls			Boys
	Girls (2C)			Boys (2C)
Mean occupational level	2.87			2.26
Standard deviation	1.74			.97
t		2.440		
Confidence level		.05		
	Girls (2D)			Boys (2D)
Mean occupational level	2.61			2.53
Standard deviation	1.65			.99
t		.317		
Confidence level		n.s.		
	Girls (2A)	Girls (2C)	Boys (2A)	Boys (2C)
Mean occupational level	2.64	2.87	2.25	2.26
Standard deviation	1.44	1.74	1.37	.97
t	.909		.064	
Confidence level	n.s.		n.s.	
	Girls (2A)	Girls (2D)	Boys (2A)	Boys (2D)
Mean occupational level	2.64	2.61	2.25	2.53
Standard deviation	1.44	1.65	1.37	.99
t	.123		1.600	
Confidence level	n.s.		n.s.	

little thought to alternative vocations. These questions appear near the beginning of the questionnaire, so it is unlikely that the students were already disinterested or fatigued by the task.

The most common responses were similar to those given for Question 2A. "Secretary," "teacher," "nurse," "model," and "airline stewardess" are among the top six girls' preferences for both second and third choice. These were precisely the occupations most frequently cited as first choices.

Of the boys' six most generally mentioned first choices, five ("engineer," "professional athlete," "scientist," "aviator," "lawyer") were among the six most popular as both second and third choice. "Doctor" was frequently mentioned as a first or second preference but not as a third choice.

Small (152) also reports this similarity between the favored occupation and alternate choices.

An examination of the data indicates that such "glamour" occupations as "professional athlete" and "model" are more frequently cited as second and third preferences, especially by the girls. The proportions are too small to permit one to arrive at any definite conclusion but further investigation might indicate a tendency by many students to give greater vent to fantasy in their alternate choices.

When the mean occupational levels are compared, no significant differences are found between either sex's first choice and their second or third preference (Table XXXIII).

The boys' mean occupational level is significantly higher (.05) than the girls' for the second preference but not for the third. There is an interesting sex difference although it is not significant: the mean level for the girls' third choice is 2.61, higher than their first or second occupational preference level; the boys' mean level of 2.53 is lower than that for their first or second choice.

To attain a rough measure of correspondence between occupational groups, the rank order coefficient of correlation was used. Table XXXIV indicates that the relationships between the girls' first choice and their second and third selections are not significant. Table XXXV suggests that the opposite is true for boys. Their occupational preferences, when grouped, are significantly (.01) related to their second and third choices.

A possible explanation for this situation emerges when the data are examined. Groups VI (Science) and VII (General Cultural) are the two foremost girls' categories for first choice, containing the popular occupations of "nurse" and "teacher." For second and third choice, however, these vocations decline in popularity. As has been mentioned, the more glamorous careers (e.g., "model," "airline stewardess") rise in frequency of response. The groups containing these occupations (I and VIII) soar from the middle of the ranked list to near the top.

No similar pattern exists for the boys. The three

TABLE XXXIV

COMPARISON OF RANKED OCCUPATIONAL GROUPS IN REGARD TO QUESTION 2A WITH RANKED OCCUPATIONAL GROUPS IN REGARD TO QUESTIONS 2C, 2D, 4A, 4C, 5A, 5B, 7C, 8B, 9B, 10B, 10D, 10F, 10H, 15A, AND 17G FOR GIRLS

Classification	2A	2C	2D	4A	4C	5A	5B	7C	8B*	15A	17G
Group I	3.5	2	3	4	2	5.5	2	4	2.5	1	4
Group II	7	6	7	7	7	2	3	6.5	7.5	7.5	2
Group III	5	4	1	4	4.5	1	1	6.5	5.5	3.5	3
Group IV	6	7.5	7	7	7	3	4	6.5	7.5	5	7.5
Group V	8	7.5	7	7	7	8	7	6.5	5.5	6	7.5
Group VI	2	3	5	2	3	4	7	3	2.5	7.5	5.5
Group VII	1	5	3	1	1	7	5	1.5	4	3.5	5.5
Group VIII	3.5	1	3	4	4.5	5.5	7	1.5	1	2	1

Statistic	2A and 2C	2A and 2D	2A and 4A	2A and 4C
r'	.649	.619	.970	.857
Confidence level	n.s.	n.s.	.01	.05

Statistic	2A and 5A	2A and 5B	2A and 7C	2A and 8B*
r'	-.167	.042	.875	.699
Confidence level	n.s.	n.s.	.05	n.s.

Statistic	2A and 15A	2A and 17G
r'	.375	.137
Confidence level	n.s.	n.s.

*combined responses to Questions 8B, 9B, 10B, 10D, 10F, and 10H

KEY:	
Group I:	Service
Group II:	Business Contact
Group III:	Organization
Group IV:	Technology
Group V:	Outdoor
Group VI:	Science
Group VII:	General Cultural
Group VIII:	Arts and Entertainment

TABLE XXXV

COMPARISON OF RANKED OCCUPATIONAL GROUPS IN REGARD TO QUESTION 2A WITH RANKED OCCUPATIONAL GROUPS IN REGARD TO QUESTIONS 2C, 2D, 4A, 4C, 5A, 5B, 7C, 8B, 9B, 10B, 10D, 10F, 10H, 15A, AND 17G FOR BOYS

Classification	2A	2C	2D	4A	4C	5A	5B	7C	8B*	15A	17G
Group I	6	6.5	6	7	7.5	4	5	7	5.5	1	4
Group II	8	6.5	8	4	6	2	2	7	7.5	2	3
Group III	5	5	4	2	4	1	1	3	7.5	4	1
Group IV	1	2	1	3	3	3	4	4.5	2	3	2
Group V	7	8	7	8	7.5	5	8	7	4	5	7.5
Group VI	2	3	3	1	1	8	6.5	2	3	6	6
Group VII	4	4	5	5	2	6	3	1	5.5	7.5	7.5
Group VIII	3	1	2	6	5	7	6.5	4.5	1	7.5	5

Statistic	2A and 2C	2A and 2D	2A and 4A	2A and 4C
r'	.887	.952	.500	.756
Confidence level	.01	.01	n.s.	.05

Statistic	2A and 5A	2A and 5B	2A and 7C	2A and 8B*
r'	-.429	-.149	+.649	+.714
Confidence level	n.s.	n.s.	n.s.	n.s.

Statistic	2A and 15A	2A and 17G
r'	-.210	.065
Confidence level	n.s.	n.s.

*combined responses to Questions 8B, 9B, 10B, 10D, 10F, and 10H

KEY:	
Group I:	Service
Group II:	Business Contact
Group III:	Organization
Group IV:	Technology
Group V:	Outdoor
Group VI:	Science
Group VII:	General Cultural
Group VIII:	Arts and Entertainment

most popular occupational groups (IV, VI, VIII) do not drop below third place for either of the questions which elicit second and third preferences.

Question 3 inquires, "When did you decide on the kind of work you want to do?" Table XXXVI presents the replies; seventh and eighth grade responses are listed separately for comparative purposes. These findings are similar to those reported by Bennett (9:244) in her study of ninth graders' vocational interests.

When mean ages are compared (Table XXXVII), the seventh grade mean of 11.7 is not significantly different from the eighth grade mean of 11.9. The girls' mean of 11.4, however, is significantly different (.01) from the boys' mean of 12.5. This corroborates the findings of Norton (363) and other investigators who discovered that girls generally make their occupational decision somewhat earlier than boys.

A comparison of the mean ages reported by IEP and PMA groups (Tables XXXVIII through XLI) discloses no significant differences. Mehta (348) studied ninth graders' occupational preferences and found no differences among mental ability groups.

These results, of course, are not final. Many of these students will change their preferences several times and eventually enter a different line of work from the one they prefer in their junior high school years. Perhaps

TABLE XXXVI

TABULATION OF DATA FOR QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

Response	7th Grade	8th Grade	Girls	Boys	Total
When I was 14.	0.0%	11.4%	4.9%	4.2%	4.6%
13	11.4	15.7	12.3	13.8	13.1
12	15.2	12.9	14.8	13.8	14.2
11	14.2	6.4	12.3	10.0	11.1
10	10.4	5.7	7.4	9.5	8.5
9	.9	.7	1.2	.5	.8
8	2.8	2.1	3.1	2.1	2.6
7	1.9	2.1	2.5	1.6	2.0
6	0	.7	.6	0	.3
A long time ago.	4.3	2.1	4.9	2.1	3.4
I haven't.	6.6	7.9	3.1	10.6	7.1
Don't know.	5.2	7.9	5.6	6.9	6.3
Incorrect response	5.7	3.6	5.6	4.2	4.8
No response	21.3	20.7	21.6	20.6	21.1

TABLE XXXVII

COMPARISON OF MEAN AGES IN REGARD TO QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

Statistic	7th Grade	8th Grade	Girls	Boys
Mean age	11.70	11.91	11.37	12.50
Standard deviation	2.47	2.65	1.65	1.97
t	2.000		4.313	
Confidence level	n.s.		.01	

TABLE XXXVIII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
When I was 14	13.3%	15.4%	22.6%	2.3%
13	13.3	26.9	12.9	13.9
12	23.3	15.4	16.1	6.9
11	6.6	3.8	3.2	9.2
10	3.3	0	6.4	6.9
9	3.3	0	0	0
8	0	0	6.4	4.6
7	3.3	0	0	0
A long time ago.	6.6	11.5	0	4.6
I haven't.	3.3	0	6.4	9.2
Don't know.	6.6	0	6.4	11.6
Incorrect response; no response	16.6	26.9	19.4	30.2

TABLE XXXIX

COMPARISON OF IEP STANDARD DEVIATION GROUPS' MEAN AGES IN REGARD TO QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

Statistic	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Mean age	12.00	12.87	12.24	11.47
Standard deviation	1.79	.89	1.89	2.51
t	1.851		1.059	
Confidence level	n.s.		n.s.	

TABLE XL

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
When I was 14.	7.1%	9.5%	25.0%	8.3%
13	7.1	4.8	14.3	16.7
12	17.9	14.3	0	13.9
11	7.1	9.5	3.6	8.3
10	10.7	0	14.3	2.8
9	0	0	0	0
8	0	0	7.1	2.8
7	0	0	0	0
A long time ago.	10.7	9.5	3.6	0
I haven't.	0	9.5	10.7	13.9
Don't know.	3.6	9.5	3.6	8.3
Incorrect response; no response	35.7	33.3	17.9	25.0

TABLE XLI

COMPARISON OF PMA STANDARD DEVIATION GROUPS' MEAN AGES IN REGARD TO QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

Statistic	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Mean age	11.86	12.37	12.06	12.16
Standard deviation	1.37	1.19	2.37	1.50
t	.864		.148	
Confidence level	n.s.		n.s.	

mental ability differences would appear if the investigator knew at what age the vocational interest appeared which was to develop into the final occupational choice.

II. WHAT FACTORS DO THE STUDENTS PERCEIVE AS INFLUENCING THEIR PREFERENCES?

Question 2B follows Question 2A ("What kind of work do you want to do when you finish school?") and asks, "Why?" Responses to this question are revealed in Table XLII; Table XLIII presents the girls' and boys' three most frequently mentioned reasons.

About 25 per cent of both sexes replied that they enjoy or like the work they are planning to do. Next in frequency for girls were the responses, "Because it's interesting" and "To help humanity." Boys' second and third most often mentioned reasons were, "Because the pay is good" and "Because my father is one."

Less than three per cent of each sex mentioned ability or talent as a factor. This is another indication that aptitude is rarely a conscious consideration of junior high school students as they make their vocational plans.

Questions 5A and 5B ask, "What kind of work does your father do? Your mother?" Tables XLIV and XLV list the most frequently mentioned responses. Tables XLVI and XLVII categorize all the responses by occupational group and level.

TABLE XLII

GIRLS' AND BOYS' RESPONSES TO QUESTION 2B ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), "WHY?"

Response	Girls	Boys	Total
I enjoy it; I like it.	25.9%	22.8%	24.2%
I have talent; I'm good at it.	2.5	2.6	2.6
It's a good job; there's a shortage	3.7	2.6	3.1
It's interesting.	8.0	2.1	4.8
My father is one.	0	3.2	1.7
To help humanity; to help the country.	4.9	.5	2.5
The pay is good.	1.8	4.2	3.1
Other responses	4.4	.5	2.3
Don't know	.6	1.6	1.1
No response	48.1	59.8	54.4

TABLE XLIII

GIRLS' AND BOYS' THREE MOST FREQUENTLY MENTIONED REASONS IN RESPONSE TO QUESTION 2B ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), "WHY?"

Response	Girls	Response	Boys
I enjoy it; I like it.	25.9%	I enjoy it; I like it.	22.8%
It's interesting.	8.0	The pay is good.	4.2
To help humanity; to help the country	4.9	My father is one.	3.2
Total	38.8	Total	30.2

TABLE XLIV

EIGHT MOST FREQUENTLY MENTIONED OCCUPATIONS IN RESPONSE TO QUESTION 5A, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

Response	Fathers
Salesman	19.6%
Owner	9.6
Manager	8.8
Business executive	7.1
Engineer	5.1
Scientist	3.1
Contractor	2.5
Doctor	2.3
Total	58.1

TABLE XLV

SEVEN MOST FREQUENTLY MENTIONED OCCUPATIONS IN RESPONSE TO QUESTION 5B, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

Response	Mothers
Housewife	57.5%
Secretary	6.5
Store clerk	2.8
School teacher	2.0
Bookkeeper	1.4
Saleswoman	1.4
Waitress	1.1
Total	72.7

TABLE XLVI

OCCUPATIONS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 5A, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

Classification		Fathers
Group III:	Organization	37.6%
Group II:	Business Contact	22.2
Group IV:	Technology	19.4
Group VI:	Science	5.9
Group I:	Service	4.6
Group VIII:	Arts and Entertainment	2.9
Group VII:	General Cultural	2.9
Group V:	Outdoor	.6
Level 3		59.5
Level 2		16.8
Level 4		10.0
Level 1		6.9
Level 5; Level 6		2.6
Don't know		.3
No response		3.9

TABLE XLVII

OCCUPATIONS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 5B, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

Classification		Mothers
Group III:	Organization	11.6%
Group II:	Business Contact	4.5
Group I:	Service	3.7
Group VII:	General Cultural	2.8
Group IV:	Technology	2.5
Group VIII:	Arts and Entertainment	.6
Group VI:	Science	.6
Group V:	Outdoor	0
Level 4		14.1
Level 5; Level 6		5.1
Level 3		4.5
Level 2		2.3
Level 1		.3
Housewife		57.5
Don't know		1.7
No response		14.3

The socio-economic position of the group is fairly high. Most of the fathers are engaged in professional, semi-professional, and managerial work. Many of the mothers are secretaries, teachers, and saleswomen.

One out of four mothers were reported to hold jobs outside the home. This proportion is similar to the national percentage for mothers with children of this age (162:10) even though the family income for the Skokie sample is considerably above the national average.

As one would expect, there is a significant (.01) difference between the mean occupational level of these working mothers and the mean occupational level of their husbands (Table XLVIII).

Tables XLIX through LIII categorize the occupations of the IEP and PMA groups' parents. The high-scoring girls' and boys' parents have higher mean occupational levels than the low-scoring girls' and boys' parents, but the difference is not statistically significant (Table LIV).

There is a significant difference (.05) when the number of students with non-working mothers is compared. High-scoring students for both the IEP and PMA groups responded more frequently that their mother was a housewife (Tables LV and LVI). Whether this difference is primarily a socio-economic one or a psychological one cannot be ascertained on the basis of this data. Suggestions for further research are made in Chapter Five.

TABLE XLVIII

COMPARISON OF MEAN OCCUPATIONAL LEVELS IN REGARD TO GIRLS' AND BOYS' COMBINED RESPONSES TO QUESTIONS 5A and 5B, "WHAT KIND OF WORK DOES YOUR FATHER DO? YOUR MOTHER?",

Statistic	Fathers	Mothers
Mean occupational level	2.62	3.81*
Standard deviation	.89	.91
t	9.917	
Confidence level	.01	

*excluding housewife

TABLE XLIX

IEP STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 5A, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

Classification		High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Group I:	Service	0.0%	3.8%	3.2%	2.3%
Group II:	Business Contact	20.0	34.6	22.6	30.2
Group III:	Organization	36.6	50.0	48.4	37.2
Group IV:	Technology	30.0	3.8	12.9	16.2
Group V:	Outdoor	0	0	0	0
Group VI:	Science	6.6	0	6.4	0
Group VII:	General Cultural	0	0	3.2	0
Group VIII:	Arts and Entertainment	3.3	3.8	0	4.6
Level 1		0	0	6.4	6.9
Level 2		43.3	19.2	16.1	6.9
Level 3		46.6	69.2	64.5	58.1
Level 4		6.6	7.7	3.2	16.2
Level 5; Level 6		0	0	6.4	2.3
No response		3.3	3.8	3.2	9.2

TABLE L

IEP STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 5B, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

Classification		High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Group I:	Service	3.3%	11.5%	0.0%	4.6%
Group II:	Business Contact	3.6	7.7	0	4.6
Group III:	Organization	13.3	26.9	12.9	4.6
Group IV:	Technology	0	3.8	0	6.9
Group V:	Outdoor	0	0	0	0
Group VI:	Science	0	3.8	0	2.3
Group VII:	General Cultural	3.3	0	6.4	0
Group VIII:	Arts and Entertainment	0	0	0	0
Level 1		0	0	0	2.3
Level 2		6.6	0	6.4	0
Level 3		10.0	15.4	0	6.9
Level 4		10.0	23.1	12.9	4.6
Level 5; Level 6		0	15.4	0	9.2
Housewife		56.6	38.5	71.0	48.8
No response		16.6	7.7	9.7	27.9

TABLE LI

PMA STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP, AND LEVEL FOR QUESTION 5A, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

Classification		High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Group I:	Service	3.6%	0.0%	0.0%	8.3%
Group II:	Business Contact	25.0	23.8	25.0	30.6
Group III:	Organization	35.7	57.1	46.4	27.8
Group IV:	Technology	21.4	4.8	14.3	19.4
Group V:	Outdoor	0	0	0	0
Group VI:	Science	3.6	4.8	7.1	0
Group VII:	General Cultural	3.6	0	0	0
Group VIII:	Arts and Entertainment	3.6	4.8	0	2.8
Level 1		0	9.5	7.1	5.6
Level 2		28.6	14.3	10.7	8.3
Level 3		57.1	61.9	67.9	55.6
Level 4		10.7	9.5	3.6	13.9
Level 5; Level 6		0	0	3.6	5.6
No response		3.6	4.8	7.1	11.1

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TABLE LII

PMA STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 5B, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

Classification		High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Group I:	Service	7.1%	4.8%	0.0%	2.8%
Group II:	Business Contact	0	4.8	3.6	5.6
Group III:	Organization	10.7	23.8	10.7	5.6
Group IV:	Technology	0	9.5	3.6	11.1
Group V:	Outdoor	0	0	0	0
Group VI:	Science	0	0	3.6	0
Group VII:	General Cultural	0	0	0	0
Group VIII:	Arts and Entertainment	0	0	0	0
Level 1		0	0	3.6	0
Level 2		3.6	0	0	0
Level 3		7.1	9.5	3.6	5.6
Level 4		7.1	28.6	14.3	5.6
Level 5; Level 6		0	4.8	0	13.9
Housewife		75.0	52.4	60.7	41.7
No response		7.1	4.8	17.9	33.3

TABLE LIII

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES (CLASSIFIED IN TERMS OF OCCUPATIONAL LEVEL) TO QUESTIONS 4A, 4C, 5A, AND 5B

Statistic	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Mean occupational level for 4A	2.14	3.50	1.67	2.44
Standard deviation for 4A	.91	1.04	.65	1.13
t	2.514		2.517	
Confidence level	.05		.05	
Mean occupational level for 4C	2.10	2.08	1.56	2.08
Standard deviation for 4C	.74	1.16	.53	1.65
t	.047		2.400	
Confidence level	n.s.		.05	
Mean occupational level for 5A	2.62	2.88	2.87	3.00
Standard deviation for 5A	.61	.52	.86	.83
t	1.667		.622	
Confidence level	n.s.		n.s.	
Mean offupational level for 5B	3.12	4.00	3.33	3.80
Standard deviation for 5B	.83	.78	1.03	1.32
t	2.304		.738	
Confidence level	.05		n.s.	

TABLE LIV

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES (CLASSIFIED IN TERMS OF OCCUPATIONAL LEVEL) TO QUESTIONS 4A, 4C, 5A, AND 5B

Statistic	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Mean occupational level for 4A	2.60	2.80	2.00	2.40
Standard deviation for 4A	1.34	1.10	.64	1.19
t	.293		1.053	
Confidence level	n.s.		n.s.	
Mean occupational level for 4C	2.33	2.80	1.37	1.58
Standard deviation for 4C	1.00	1.10	.52	.67
t	.719		.745	
Confidence level	n.s.		n.s.	
Mean offupational level for 5A	2.81	3.06	2.85	3.06
Standard deviation for 5A	.62	.89	.77	.88
t	1.008		.959	
Confidence level	n.s.		n.s.	
Mean occupational level for 5B	3.20	3.89	3.33	4.33
Standard deviation for 5B	.84	.60	1.21	.87
t	1.465		1.608	
Confidence level	n.s.		n.s.	

TABLE LV

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 5B, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

Response	High IEP Girls and Boys	Low IEP Girls and Boys	X^2	Confidence level
Housewife	63.9%	44.9%	3.978	.05
Occupations other than housewife	22.9	34.8	1.658	n.s.

TABLE LVI

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 5B, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

Response	High PMA Girls and Boys	Low PMA Girls and Boys	X^2	Confidence level
Housewife	67.9%	45.6%	4.717	.05
Occupations other than housewife	19.6	31.6	1.565	n.s.

Questions 4A and 5A ask, "What kind of work does your father want you to do? Your mother?"

Tables LVII and LVIII indicate the five most frequently cited parental vocational suggestions. "Housewife" was apparently mentioned more often by the girls' parents than by the girls themselves. "Nurse," "secretary," and "doctor" were also suggested by both parents. "Teacher" was the vocation most often cited by both fathers and mothers.

"Scientist," one of the three most popular boys' preferences, is not included in the top five occupations mentioned by the parents. This could be an additional demonstration of the unfavorable aspects of the scientific stereotype. "Doctor," a vocation with a highly favorable stereotype, heads both the fathers' and mothers' lists. Both parents recommended "business executive," "lawyer," and "engineer," while "salesman" rounded out the top five for fathers and "teacher" for mothers.

Parents' occupational suggestions are categorized in Tables LIX through LXII. When occupational levels are compared (Table LXIII), it is apparent that mothers of the Skokie sample generally suggested extremely high-level occupations for their sons. The mean occupational level of 1.79 is significantly higher than the mothers' mean suggestion level for their daughters, the fathers' mean suggestion level for their sons, and the boys' own preferred occupational level. None of the other occupational level comparisons attain statistical significance.

TABLE LVII

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED OCCUPATIONS IN RESPONSE TO QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Response	Girls	Response	Boys
Teacher	7.4%	Doctor	9.0%
Nurse	3.1	Salesman	4.8
Secretary	3.1	Business executive	3.7
Doctor	1.8	Lawyer	3.7
Housewife	1.8	Engineer	3.2
Total	17.2	Total	24.4

TABLE LVIII

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED OCCUPATIONS IN RESPONSE TO QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Response	Girls	Response	Boys
Teacher	9.9%	Doctor	12.2%
Housewife	3.7	Lawyer	3.7
Secretary	3.7	Engineer	2.1
Nurse	3.1	Business executive	1.6
Doctor	1.8	Teacher	1.6
Total	22.2	Total	21.2

TABLE LIX

GIRLS' OCCUPATIONS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Classification		Girls
Group VII:	General Cultural	7.4%
Group VI:	Science	6.1
Group VIII:	Arts and Entertainment	3.7
Group I:	Service	3.7
Group III:	Organization	3.7
Group II:	Business Contact	0
Group V:	Outdoor	0
Group IV:	Technology	0
Level 2		12.3
Level 4		7.4
Level 1		4.3
Level 3		0
Level 5; Level 6		0
Don't know		16.0
Freedom of choice		30.2
Incorrect response; no response		29.6

TABLE LX

BOYS' OCCUPATIONS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Classification		Boys
Group VI:	Science	12.7%
Group III:	Organization	8.4
Group IV:	Technology	7.4
Group II:	Business Contact	5.8
Group VII:	General Cultural	3.7
Group VIII:	Arts and Entertainment	2.2
Group I:	Service	1.0
Group V:	Outdoor	0
Level 2		16.9
Level 3		12.1
Level 1		9.0
Level 4		2.7
Level 5; Level 6		.5
Don't know		19.0
Freedom of choice		25.4
Incorrect response; no response		14.2

TABLE LXI

GIRLS' OCCUPATIONS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Classification		Girls
Group VII:	General Cultural	10.5%
Group I:	Service	6.2
Group VI:	Science	5.5
Group III:	Organization	3.7
Group VIII:	Arts and Entertainment	3.7
Group II:	Business Contact	0
Group V:	Outdoor	0
Group IV:	Technology	0
Level 2		14.8
Level 4		11.1
Level 1		3.7
Level 3		0
Level 5; Level 6		0
Don't know		11.7
Freedom of choice		26.5
Incorrect response; no response		32.1

TABLE LXII

BOYS' OCCUPATIONS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Classification		Boys
Group VI:	Science	15.4%
Group VII:	General Cultural	5.3
Group IV:	Technology	4.3
Group III:	Organization	2.6
Group VIII:	Arts and Entertainment	1.6
Group II:	Business Contact	1.1
Group V:	Outdoor	0
Group I:	Service	0
Level 1		13.3
Level 2		12.2
Level 3		2.7
Level 4		2.1
Level 5; Level 6		0
Don't know		20.6
Freedom of choice		19.0
Incorrect response; no response		30.2

TABLE LXIII

COMPARISON OF MEAN OCCUPATIONAL LEVELS IN REGARD TO GIRLS' AND BOYS' RESPONSES FOR QUESTIONS 2A ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"), AND 4C ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?")

Statistic			Girls			Boys
			Girls (4A)			Boys (4A)
Mean occupational level			2.44			2.24
Standard deviation			1.12			1.02
t					.900	
Confidence level					n.s.	
			Girls (4C)			Boys (4C)
Mean occupational level			2.62			1.79
Standard deviation			1.12			.88
t					4.157	
Confidence level					.01	
	Girls (4A)		Girls (4C)	Boys (4A)		Boys (4C)
Mean occupational level	2.44		2.62	2.24		1.79
Standard deviation	1.12		1.12	1.02		.88
t		.775			2.752	
Confidence level		n.s.			.01	
	Girls (2A)		Girls (4A)	Boys (2A)		Boys (4A)
Mean occupational level	2.64		2.44	2.25		2.24
Standard deviation	1.44		1.12	1.37		1.02
t		.917			.062	
Confidence level		n.s.			n.s.	
	Girls (2A)		Girls (4C)	Boys (2A)		Boys (4C)
Mean occupational level	2.64		2.62	2.25		1.79
Standard deviation	1.44		1.12	1.37		.88
t		.098			2.875	
Confidence level		n.s.			.01	

Tables LXIV and LXV summarize girls' and boys' responses to Questions 4A and 4C. About one out of every three students attributed occupational suggestions to his father or mother. This is considerably lower than Remmers and Radler's figure of 60 per cent (104:89). The latter statistic, however, was based on a nation-wide study and research indicates that more vocational freedom of choice is permitted by parents in the upper-middle classes (338).

When the Skokie sample is divided according to the fathers' occupational level, a significantly higher number of fathers at Roe's second highest occupational level are found to give their daughters freedom of occupational selection. This tendency is also apparent for the boys but, as Table LXVI demonstrates, it is not statistically significant.

When such responses as , "He says it's up to me," and "She's letting me make my own decision" are compared, about as many fathers as mothers are reported to have given freedom of choice to their daughters (Table LXVII). The same holds true when the boys' responses are examined. In addition, there is no significant difference between the sexes regarding vocational freedom of selection.

Significant differences appear when the proportions of parents indicating a vocational preference for their children are compared. Significantly (.05) more fathers than mothers were said to have given career suggestions to the boys. About the same number of fathers as of mothers

TABLE LXIV

SUMMARY OF GIRLS' AND BOYS' RESPONSES TO QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Response	Girls	Boys	Total
Occupational preference attributed to father	24.1%	41.3%	33.3%
Freedom of choice	30.2	25.4	27.6
Don't know	16.0	19.0	17.7
Incorrect response; no response	29.6	14.3	21.4

TABLE LXV

SUMMARY OF GIRLS' AND BOYS' RESPONSES TO QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Response	Girls	Boys	Total
Occupational preference attributed to mother	29.6%	30.2%	29.9%
Freedom of choice	26.5	19.0	22.5
Don't know	11.7	20.6	16.5
Incorrect response; no response	32.1	30.2	31.1

TABLE LXVI

GIRLS' AND BOYS "FREEDOM OF CHOICE" CATEGORIES FOR QUESTION 4A CLASSIFIED AS TO THEIR FATHERS' OCCUPATIONAL LEVELS

Classification	Girls	X^2	Confidence level	Boys	X^2	Confidence level
Level 1	16.7%	.215	n.s.	25.0%	.194	n.s.
Level 2	61.3	10.102	.01	40.9	2.179	n.s.
Level 3	26.1	.209	n.s.	24.6	.001-	n.s.
Level 4; Level 5	23.8	.089	n.s.	16.1	1.562	n.s.

NOTE: Girls' percentages are compared to the total girls' percentage of 30.2 in the "freedom of choice" category. Boys' percentages are compared to the total boys' percentage of 25.4 in the "freedom of choice" category.

TABLE LXVII

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTIONS 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?") AND 4C ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?")

Response	Girls	X^2	Confidence level	Boys	X^2	Confidence level
Career suggestion given student by father	24.1%			41.3%		
Career suggestion given student by mother	29.5	1.105	n.s.	30.2	4.632	.05
Freedom of choice given student by father	30.2			25.4		
Freedom of choice given student by mother	26.5	.380	n.s.	19.0	1.692	n.s.
Career suggestion given student by father	24.1			41.3	14.953	.01
Career suggestion given student by mother	29.6			30.2	.001-	n.s.
Freedom of choice given student by father	30.2			25.4	1.152	n.s.
Freedom of choice given student by mother	26.5			19.0	1.835	n.s.

reportedly stated preferences for their daughters (Table LXVII).

When girls' responses are compared to boys' responses, significantly (.01) more boys responded that their fathers had given them occupational advice. There was no such difference demonstrated on the part of the mother (Table LXVII).

It becomes apparent that fathers are perceived to be more directive in the case of boys' careers plans than girls'. They are also more directive than mothers regarding their sons' occupational future. It is possible that the male parent is more ego-involved in the case of his son; it is up to the young boys to "carry on the family tradition" and reflect glory back upon the father. Further investigation is needed to determine the nature of the father's occupational advice. Is it a command, a preference, or merely a suggestion? The nature of this advice might be related to the personality needs of the father.

A number of investigators (58; 337; 338) have discovered that inability to state a vocational decision characterizes students whose fathers engage in low-level or very high-level work. Although the Skokie sample contains few children from low-level families, a number of girls and boys come from homes where the father's work falls into the very highest Roe classification.

Table LXVIII indicates that 17 per cent of the girls

TABLE LXVIII

GIRLS' AND BOYS' "DON'T KNOW" AND "NO RESPONSE" CATEGORIES FOR QUESTION 2A CLASSIFIED AS TO THEIR FATHERS' OCCUPATIONAL LEVELS

Classification	Girls	X^2	Confidence level	Boys	X^2	Confidence level
Level 1	16.6%	.629	n.s.	41.7%	4.121	.05
Level 2	12.9	.008	n.s.	9.1	.081	n.s.
Level 3	7.6	.601	n.s.	13.2	.075	n.s.
Level 4; Level 5	22.7	1.500	n.s.	10.7	.083	n.s.

NOTE: Girls' percentages are compared to the total girls' percentage of 11.7 responding "I don't know" or not responding. Boys' percentages are compared to the total boys' percentage of 14.8 responding "I don't know" or not responding.

from these homes and 42 per cent of the boys did not state a vocational preference in comparison to 12 per cent and 15 per cent of the total girls and boys queried. The girls' deviation is not statistically significant, but the boys' is significant at the .05 level.

The fact that nearly half the boys in this high-level group are undecided may be accounted for in several ways. They have probably grown up in an affluent situation where the future seemed secure and where vocational decisions did not have to be made. In addition, there is the probable recognition that it would be difficult to attain a position on a similar level to that of the father. Finally, rebellion against the male parent might take this form in the upper strata--a refusal by the son to put himself in a role similar to that of the father.

A number of studies (301; 360) have indicated that boys choose their father's occupation infrequently but more often than can be attributed to chance. Table LXIX demonstrates this to be true of the Skokie sample.

The same occupation was cited as both the student's preference (Question 2A) and the father's job (Question 5A) by 12 per cent of the boys. Slightly over one per cent of the girls did the same; this sex difference is significant at the .01 level. In addition, 16 per cent of the boys stated that their fathers advised them to take up the same

TABLE LXIX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTIONS 2A ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"), 4C ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"), 5A ("WHAT KIND OF WORK DOES YOUR FATHER DO?"), AND 5B ("WHAT KIND OF WORK DOES YOUR MOTHER DO?")

Response	Girls	Boys	x^2	Confidence level
Responses to 2A and 4A the same	12.3%	21.2%	2.070	n.s.
Responses to 2A and 4A different	8.6	17.5	2.448	n.s.
Responses to 2A and 4C the same	17.9	16.4	.001-	n.s.
Responses to 2A and 4A different	9.3	12.2	1.357	n.s.
Responses to 2A and 5A the same	1.2	11.6	7.313	.01
Responses to 2A and 5A different	84.6	70.9	.375	n.s.
Responses to 2A and 5B the same	3.7	1.1	.443	n.s.
Responses to 2A and 5B different	75.3	70.9	.355	n.s.
Responses to 4A and 5A the same	.6	15.9	23.520	.01
Responses to 4A and 5A different	21.6	25.4	.149	n.s.
Responses to 4B and 5B the same	3.7	2.6	.180	n.s.
Responses to 4B and 5B different	24.1	27.0	.123	n.s.

line of work (Question 4A) in which the fathers were already engaged (Question 5A).

There were no other significant differences between the girls and boys, although some interesting data emerged from these comparisons. Less than four per cent of the mothers reportedly suggested that their daughter follow their occupation (Questions 4B and 5B); about the same number suggested their line of work for their son.

Almost the same percentage of girls as boys (18 per cent and 16 per cent) indicated they would enter the occupation suggested by their mother; nine per cent of the girls and 12 per cent of the boys said they would take a different job from the mother's preference (Questions 2A and 4C).

Similarly, 12 per cent of the girls and 21 per cent of the boys were seen to coincide in their vocational preferences with the father's advice. Nine per cent of the girls and 17 per cent of the boys selected other occupations (Questions 2A and 4A).

Once again it must be emphasized that these data were not obtained by questioning the parent directly. Instead, the students were asked what line of work their father and mother wanted them to enter. What we have, then, is the impression left with the student by any number of possible comments made by parents.

Correlations between the responses reveal several significant results (Table LXX). Each student's response

TABLE LXX

RELATIONSHIPS BETWEEN GIRLS' AND BOYS RESPONSES (CLASSIFIED AS TO OCCUPATIONAL LEVEL) TO QUESTIONS 2A ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"), 4C ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"), 5A ("WHAT KIND OF WORK DOES YOUR FATHER DO?"), AND 5B ("WHAT KIND OF WORK DOES YOUR MOTHER DO.")

Question	Number (Girls, 2A)	*r*	Confidence level	Number (Boys, 2A)	*r*	Confidence level
4A	34	.528	.01	73	.437	.01
4C	42	.625	.01	54	.518	.01
5A	139	.187	.05	157	.220	.01
5B	43	.358	.05	38	.080	n.s.
	(Girls, 4A)			(Boys, 4A)		
4C	28	.850	.01	50	.650	.01
5A	34	.131	n.s.	75	.305	.01
5B	12	.277	n.s.	21	.232	n.s.
	(Girls, 4C)			(Boys, 4C)		
5A	41	.089	n.s.	54	.166	n.s.
5B	13	.159	n.s.	19	.270	n.s.
	(Girls, 5A)			(Boys 5A)		
5B	41	.432	.01	40	.365	.05

to Questions 2A, 4A, 4C, 5A, and 5B was categorized as to occupational level and then correlated. Because all students did not respond to all five of these questions, Table LXX also indicates the number of responses on which the correlations are based.

When the occupational levels of the students' job preferences and their parents' suggestions are correlated, significant (.01) relationships are found for both sexes and both parents. This indicates that even when the father or mother made a different suggestion from the preference cited by the student, the occupational level of the vocation was similar.

One of the most commonly reported phenomena in occupational literature is the tendency for the son to prefer an occupation with a similar but somewhat higher level than his father's (16; 24; 200). This relationship exists (.01) for the Skokie sample as well.

When the girls' occupational preferences are correlated with their fathers' jobs, a significant (.05) relationship emerges as when a comparison is made with their mothers' occupations (.05). However, there is no such relationship between the levels of the sons' preferences and the mothers' jobs. This seems to indicate that the working mothers' occupational levels influence their daughters' aspirations more than their sons'. Perhaps the process of sexual identification contributes to this situation.

When the fathers' suggested vocations are compared to their own occupations, a significant (.01) relationship is found for boys but not for girls. It is possible that the father is more ego-involved in the case of his son, and therefore lets his own station in life influence his hopes for his son's future.

The level of the father's preference for both boys and girls is not related to the level of his wife's job. However, there is a significant (.01) relationship between the level of the father's preference and the level of the mother's preference for both girls and boys. On the other hand, the mother's preference level is not related to the level of her job or her husband's job. One factor underlying this condition might be the fact that mothers in the Skokie sample generally preferred very high occupational levels for their sons, regardless of their own background.

A final comparison produced significant results for both girls (.01) and boys (.05); the level of the mother's occupation is found to be significantly related to that of the father.

The current investigation, therefore, clearly demonstrates the influence a father's socio-economic status will have upon his aspirations for his son. An examination of the data has already detected a significant (.01) relationship between the father's occupational level and the level of the job the father prefers for his son. Further scrutiny of the data demonstrates this phenomenon even more clearly.

1.) Fathers whose occupational level is 1.00 prefer that their sons enter occupations with an average level of 1.00.

2.) Fathers whose occupational level is 2.00 prefer that their sons enter occupations with an average level of 1.87.

3.) Fathers whose occupational level is 3.00 prefer that their sons enter occupations with an average level of 2.20.

4.) Fathers whose occupational level is 4.00 prefer that their sons enter occupations with an average level of 2.90.

5.) Fathers whose occupational level is 5.00 prefer that their sons enter occupations with an average level of 3.67.

The relationship between the sons' (and daughters') preferences and their fathers' jobs is also striking, as is the association between parental suggestions and students' preferences. A significant relationship, however, is absent in the case of the working mothers' occupational level; it is related to her husband's job and her daughter's preference but nothing more.

Furthermore, the mother's preference for both sexes is related to the student's preference, her husband's preference, but not to her husband's occupation or her own occupation. It is possible that emotional determinants are the crucial factors here, just as emotional determinants might explain the lack of association between girls' vocational preferences and their scores on achievement and ability tests.

This trait is again demonstrated when the standard deviation groups are compared (Tables LXXI through LXXXII). Vocational freedom of choice is reportedly given to 36 per cent of the students in the high IEP groups by their fathers as compared to 14 per cent of the low IEP girls and boys (Table LXXXI). This difference is significant at the .01 level but does not appear when the mothers' willingness to give freedom of choice (28 per cent *vs*. 16 per cent) is examined). Once again, males are seen to discriminate on the basis of ability to a greater degree than females.

There are no significant differences between fathers and mothers when the PMA groups are examined or for parents of either IEP or PMA students when the vocational suggestions are divided into college and non-college categories (Table LXXXI). Considerations other than ability apparently are more influential when the Skokie parents give career suggestions to their children.

Question 4B asks, ("What kind of work does your father want you to do?") "Why?" Question 4D asks the same regarding the mother. Tables LXXXIII and LXXXIV contain a tabulation of girls' and boys' responses.

"Because I will like it" and "Because I will be happy" are the most frequently mentioned girls' responses to Question 4B. Neither of these reasons appears on the list of the boys' five most common replies (Table LXXXV). Instead, boys claim that their fathers want them to take a

TABLE LXXI

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
GROUP I: SERVICE				
Air stewardess (4)	0.0%	3.8%	0.0%	0.0%
Housewife (4)	0	3.8	0	0
WAVE (4)	3.3	0	0	0
GROUP II: BUSINESS CONTACT				
Salesman (3)	0	0	3.2	9.2
GROUP III: ORGANIZATION				
Business executive (2)	0	0	3.2	6.9
Secretary (4)	0	15.4	0	0
GROUP IV: TECHNOLOGY				
Physicist (2)	0	0	3.2	0
Aviator; jet pilot (3)	0	0	0	4.6
Printer (4)	0	0	0	2.3
Housepainter (5)	0	0	0	2.3
GROUP V: OUTDOOR (none)				
GROUP VI: SCIENCE				
Doctor (1)	3.3	0	16.1	9.2
Dentist (2)	0	0	3.2	2.3
Nurse (2)	3.3	0	0	0
Pharmacist (2)	0	0	3.2	2.3
Veterinarian (2)	3.3	0	0	0
GROUP VII: GENERAL CULTURAL				
Lawyer (2)	0	0	6.4	2.3
Teacher (2)	10.0	7.7	0	0
GROUP VIII: ARTS AND ENTERTAINMENT (none)				
Freedom of choice	36.6	19.2	35.5	13.9
Don't know	20.0	15.4	19.4	25.6
Incorrect response; no response	20.0	34.6	6.4	18.6

TABLE LXXII

IEP STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Classification		High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Group I:	Service	3.3%	7.7%	0.0%	0.0%
Group II:	Business Contact	0	0	3.2	9.2
Group III:	Organization	0	15.4	3.2	6.9
Group IV:	Technology	0	0	3.2	9.2
Group V:	Outdoor	0	0	0	0
Group VI:	Science	10.0	0	22.6	13.9
Group VII:	General Cultural	10.0	7.7	6.4	2.3
Group VIII:	Arts and Entertainment	0	0	0	0
Level 1		3.3	0	16.1	9.2
Level 2		16.6	7.7	19.4	11.6
Level 3		0	0	3.2	16.2
Level 4		3.3	23.1	0	2.3
Level 5; Level 6		0	0	0	2.3
Freedom of choice		36.6	19.2	35.5	13.9
Don't know		20.0	15.4	19.4	25.6
Incorrect response; no response		20.0	34.6	6.4	18.6

TABLE LXXIII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Responses	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
GROUP I: SERVICE				
Air stewardess (4)	3.3%	3.8%	0.0%	0.0%
GROUP II: BUSINESS CONTACT (none)				
GROUP III: ORGANIZATION				
Business executive (2)	0	0	3.2	0
Secretary (4)	0	11.5	0	0
GROUP IV: TECHNOLOGY				
Aviator; jet pilot (3)	0	0	0	4.6
Housepainter (5)	0	0	0	2.3
GROUP V: OUTDOOR (none)				
GROUP VI: SCIENCE				
Doctor (1)	3.3	0	12.9	9.2
Dentist (2)	0	0	3.2	2.3
Nurse (2)	3.3	0	0	0
Pharmacist (2)	0	0	3.2	2.3
Veterinarian (2)	0	0	0	2.3
GROUP VII: GENERAL CULTURAL				
Lawyer (2)	0	0	6.4	4.6
Teacher (2)	23.3	3.8	0	0
GROUP VIII: ARTS AND ENTERTAINMENT (none)				
Freedom of choice	23.3	23.1	29.0	16.2
Don't know	20.0	11.5	35.5	11.6
Incorrect response; no response	23.3	46.1	6.4	44.1

TABLE LXXIV

IEP STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Classification		High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Group I:	Service	3.3%	3.8%	0.0%	0.0%
Group II:	Business Contact	0	0	0	0
Group III:	Organization	0	11.5	3.2	0
Group IV:	Technology	0	0	0	6.9
Group V:	Outdoor	0	0	0	0
Group VI:	Science	6.6	0	19.4	16.2
Group VII:	General Cultural	23.3	3.8	6.4	4.6
Group VIII:	Arts and Entertainment	0	0	0	0
Level 1		3.3	0	12.9	9.2
Level 2		26.6	3.8	16.1	11.6
Level 3		0	0	0	4.6
Level 4		3.3	15.4	0	0
Level 5; Level 6		0	0	0	2.3
Freedom of choice		23.3	23.1	32.3	16.2
Don't know		20.0	11.5	32.3	11.6
Incorrect response; no response		23.3	46.1	6.4	44.1

TABLE LXXV

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTIONS 2A, 4A, 4C, 5A, and 5B

Responses	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Responses to 2A and 4A the same	16.6%	23.1%	12.9%	20.9%
Responses to 2A and 4A different	6.6	7.7	19.4	20.9
Responses to 2A and 4C the same	30.0	15.4	26.1	20.9
Responses to 2A and 4C different	6.6	7.7	9.7	6.9
Responses to 2A and 5A the same	0	0	3.2	9.2
Responses to 2A and 5A different	96.6	84.6	83.9	62.8
Responses to 2A and 5B the same	3.3	0	0	0
Responses to 2A and 5B different	76.6	76.9	83.9	58.1

TABLE LXXVI

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
GROUP I: SERVICE				
Housewife (4)	3.6%	4.8%	0.0%	0.0%
WAVE (4)	3.6	0	0	0
GROUP II: BUSINESS CONTACT				
Real estate agent (3)	0	0	3.6	0
Salesman (3)	0	0	0	1.11
GROUP III: ORGANIZATION				
Business executive (2)	0	0	3.6	5.6
Advertising manager (3)	0	0	3.6	0
Secretary (4)	0	4.8	0	0
GROUP IV: TECHNOLOGY				
Engineer (2)	0	0	3.6	2.8
Physicist (2)	0	0	3.6	0
Aviator; jet pilot (3)	0	0	0	2.8
Printer (4)	0	0	0	2.8
Baker (5)	0	0	0	2.8
GROUP V: OUTDOOR (none)				
GROUP VI: SCIENCE				
Doctor (1)	3.6	0	7.1	11.1
Dentist (2)	0	0	3.6	2.8
Nurse (2)	0	4.8	0	0
Pharmacist (2)	0	0	3.6	0
Veterinarian (2)	0	0	3.6	0
GROUP VII: GENERAL CULTURAL				
Lawyer (2)	0	0	3.6	0
Teacher (2)	7.1	9.5	0	0
GROUP VIII: ARTS AND ENTERTAINMENT (none)				
Freedom of choice	28.6	19.0	35.7	16.7
Don't know	17.9	14.3	17.9	27.8
Incorrect response; no response	35.7	42.9	7.1	13.9

TABLE LXXVII

PMA STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Classification		High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Group I:	Service	7.1%	4.8%	0.0%	0.0%
Group II:	Business Contact	0	0	3.6	11.1
Group III:	Organization	0	4.8	7.1	5.6
Group IV:	Technology	0	0	7.1	11.1
Group V:	Outdoor	0	0	0	0
Group VI:	Science	3.6	4.8	17.9	13.9
Group VII:	General Cultural	7.1	9.5	3.6	0
Group VIII:	Arts and Entertainment	0	0	0	0
Level 1		3.6	0	7.1	11.1
Level 2		7.1	14.3	25.0	11.1
Level 3		0	0	7.1	13.9
Level 4		7.1	9.5	0	2.8
Level 5; Level 6		0	0	0	2.8
Freedom of choice		28.6	19.0	35.7	16.7
Don't know		17.9	14.3	17.9	27.8
Incorrect response; no response		35.7	42.9	7.1	13.9

TABLE LXXVIII

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
GROUP I: SERVICE				
Air stewardess (4)	3.6%	0.0%	0.0%	0.0%
Beautician (4)	0	4.8	0	0
Housewife (4)	3.6	0	0	0
GROUP II: BUSINESS CONTACT (none)				
GROUP III: ORGANIZATION				
Business executive (2)	0	0	3.6	2.8
Secretary (4)	0	4.8	0	0
GROUP IV: TECHNOLOGY				
Engineer (2)	0	0	0	5.6
Aviator; jet pilot (3)	0	0	0	2.8
GROUP V: OUTDOOR (none)				
GROUP VI: SCIENCE				
Doctor (1)	3.6	0	17.9	13.9
Dentist (2)	0	0	3.6	2.8
Nurse (2)	0	4.8	0	0
Pharmacist (2)	0	0	3.6	0
Scientist (2)	3.6	0	0	0
GROUP VII: GENERAL CULTURAL				
Lawyer (2)	0	4.8	0	2.8
Teacher (2)	17.9	4.8	0	0
GROUP VIII: ARTS AND ENTERTAINMENT				
Author (1)	0	0	0	2.8
Freedom of choice	17.9	28.6	32.1	11.1
Don't know	14.3	9.5	17.9	13.9
Incorrect response; no response	35.7	38.1	21.4	41.7

TABLE LXXIX

PMA STANDARD DEVIATION GROUPS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4C, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

Classification		High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Group I:	Service	7.1%	4.8%	0.0%	0.0%
Group II:	Business Contact	0	0	0	0
Group III:	Organization	0	4.8	3.6	2.8
Group IV:	Technology	0	0	0	8.3
Group V:	Outdoor	0	0	0	0
Group VI:	Science	7.1	4.8	25.0	16.7
Group VII:	General Cultural	17.9	9.5	0	2.8
Group VIII:	Arts and Entertainment	0	0	0	2.8
Level 1		3.6	0	17.9	16.7
Level 2		21.4	14.3	10.7	13.9
Level 3		0	0	0	2.8
Level 4		7.1	9.5	0	0
Level 5; Level 6		0	0	0	0
Freedom of choice		17.9	28.6	32.1	11.1
Don't know		14.3	9.5	17.9	13.9
Incorrect response; no response		35.7	38.1	21.4	41.7

TABLE LXXX

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTIONS 2A, 4A, 4C, 5A, and 5B

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Responses to 2A and 4A the same	10.7%	9.5%	21.4%	27.2%
Responses to 2A and 4A different	3.6	14.3	10.7	19.4
Responses to 2A and 4C the same	28.6	4.8	14.3	25.0
Responses to 2A and 4C different	0	19.0	7.1	8.3
Responses to 2A and 5A the same	0	0	10.7	11.1
Responses to 2A and 5A different	75.0	80.9	67.9	55.6
Responses to 2A and 5B the same	0	0	0	0
Responses to 2A and 5B different	67.9	76.2	67.9	50.0

TABLE LXXXI

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTIONS 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?") AND 4C ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?")

Response	High IEP Girls and Boys	Low IEP Girls and Boys	χ^2	Confidence level
Freedom of choice given student by father	36.1%	14.3%	6.875	.01
Freedom of choice given student by mother	27.9	15.9	2.111	n.s.
Careers generally requiring college preferred by father	26.2	15.9	1.490	n.s.
Careers generally not requiring college preferred by father	4.9	21.7	3.531*	n.s.
Careers generally requiring college preferred by mother	29.5	14.5	2.065	n.s.
Careers generally not requiring college preferred by mother	1.6	11.4	.098*	n.s.

*Fisher formula used.

TABLE LXXXII

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTIONS 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?") AND 4C ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?")

Response	High PMA Girls and Boys	Low PMA Girls and Boys	χ^2	Confidence level
Freedom of choice given student by father	32.1%	17.5%	2.413	n.s.
Freedom of choice given student by mother	25.0	17.5	.565	n.s.
Careers generally requiring college preferred by father	21.4	19.3	.002	n.s.
Careers generally not requiring college preferred by father	7.1	15.8	1.792	n.s.
Careers generally requiring college preferred by mother	26.8	24.5	.003	n.s.
Careers generally not requiring college preferred by mother	3.6	5.3	.007	n.s.

TABLE LXXXIII

GIRLS' AND BOYS' RESPONSES TO QUESTION 4B, ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?") "WHY?"

Response	Girls	Boys	Total
Responses in which the job is seen as meeting needs of the student:	(14.1%)	(14.8%)	(14.5%)
Because I can get ahead.	.6	2.6	1.7
Because I have the ability.	1.8	2.1	2.0
Because I will be happy.	3.1	1.1	2.0
Because I will like it.	4.9	1.1	2.8
Because it is a good job.	2.5	2.1	2.3
Because it pays well.	1.2	5.8	3.7
Responses in which the job is seen as meeting needs of the father:	(4.8)	(11.1)	(8.2)
Because he is one.	1.2	6.3	4.0
Because he likes it.	1.2	1.6	1.4
Because he used to be one.	.6	1.6	1.1
Because he wanted to be one.	0	1.6	.8
Because his mother was one.	.6	0	.3
Because my mother is one.	1.2	0	.6
Responses in which the job is seen as meeting needs of society:	(2.4)	(1.6)	(2.0)
Because it is important.	1.8	1.1	1.4
Because it will help mankind.	.6	.5	.6
Don't know	13.0	16.4	14.8
Freedom of choice	30.2	25.4	27.6
Incorrect response	6.8	7.4	7.1
No response	28.4	23.3	25.6

TABLE LXXXIV

GIRLS' AND BOYS' RESPONSES TO QUESTION 4D, ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?") "WHY?"

Response	Girls	Boys	Total
Responses in which the job is seen as meeting needs of the student:	(17.8%)	(12.1%)	(14.7%)
Because I can get ahead.	0	1.6	.8
Because I can learn from it.	1.2	0	.6
Because I have the ability.	3.1	1.6	2.3
Because I will be happy.	4.9	1.6	3.1
Because I will like it.	4.9	2.1	3.4
Because it is a good job.	3.7	2.6	3.1
Because it pays well.	0	2.6	1.4
Responses in which the job is seen as meeting needs of the mother:	(9.3)	(6.3)	(7.6)
Because my father is one.	0	3.2	1.7
Because she likes it.	2.5	2.6	2.6
Because she is one.	2.5	.5	1.4
Because she wanted to be one.	1.8	0	.8
Because she was one.	2.5	0	1.1
Responses in which the job is seen as meeting needs of society:	(1.8)	(2.1)	(1.9)
Because it is important.	1.2	.5	.8
Because it will help mankind.	.6	1.1	.8
Because our country needs them.	0	.5	.3
Don't know	11.7	17.5	14.8
Freedom of choice	26.5	19.0	22.5
Incorrect response	10.5	6.9	8.5
No response	22.2	36.0	29.6

TABLE LXXXV

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED RESPONSES TO QUESTION 4B, ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?") "WHY?"

Response	Girls	Response	Boys
Because I will like it.	4.9%	Because he is one.	6.3%
Because I will be happy.	3.1	Because it pays well.	5.8
Because it is a good job.	2.5	Because I can get ahead.	2.6
Because I have the ability.	1.8	Because I have the ability.	2.1
Because it is important.	1.8	Because it is a good job.	2.1
Total	14.1	Total	18.9

TABLE LXXXVI

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED RESPONSES TO QUESTION 4D, ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?") "WHY?"

Response	Girls	Response	Boys
Because I will be happy.	4.9%	Because my father is one.	3.2%
Because I will like it.	4.9	Because it is a good job.	2.6
Because it is a good job.	3.7	Because it pays well.	2.6
Because I have the ability.	3.1	Because she likes it.	2.6
Because she is one.	2.5	Because I will like it.	2.1
Total	19.1	Total	13.1

particular job "Because he is one," "Because it pays well," and "Because I can get ahead." Ability considerations are fourth on the list for both sexes.

Mothers are reported to suggest jobs for their daughters with the girls' happiness and liking for the work in mind (Table LXXXVI). Once again, however, boys' most frequent responses are different; they include "Because my father is one," "Because it is a good job," and "Because it pays well."

Although the number of responses to these questions is not large enough to permit definite conclusions to be made, there is a difference in the type of response given by girls and boys. Girls generally reported that their parents suggested a job for intrinsic reasons, centering around the enjoyment of the work itself. Boys' parents were seen to have mentioned extrinsic reasons more frequently, centering around the monetary benefits of the job or the parental needs it might fulfill.

Questions 6A and 6B inquire, "Has a friend or relative influenced your choice of work? If yes, how?" Eight per cent of the girls and five per cent of the boys indicated that they had experienced this influence (Table LXXXVII).

Encouragement from that person, discussions with him, and a desire to follow his example were cited by both sexes as ways in which the influence developed (Table LXXXVIII).

Questions 7A, 7B, and 7C ask, "Has anyone at school

TABLE LXXXVII

GIRLS' AND BOYS' RESPONSES TO QUESTION 6A, "HAS A FRIEND OR RELATIVE INFLUENCED YOUR CHOICE OF WORK?"

Response	Girls	Boys	Total
Yes	8.0%	4.8%	6.3%
No	19.1	13.2	15.9
No response	72.8	82.0	77.8

TABLE LXXXVIII

GIRLS' AND BOYS' RESPONSES TO QUESTION 6B, ("HAS A FRIEND OR RELATIVE INFLUENCED YOUR CHOICE OF WORK?") "IF YES, HOW?"

Response	Girls	Boys	Total
By discussing it with me; by getting me interested in it.	1.8%	1.6%	1.7%
By encouraging me to go into it.	1.8	.5	1.1
By teaching me how to do it.	.6	.5	.6
By telling me I could be good at it; by telling me that I had talent.	1.8	0	.6
By telling me it was a good job; by telling me it was important.	0	1.1	.6
I want to follow that person's example.	1.8	1.1	1.4
Total	7.8	4.8	6.0

suggested a career for you? If yes, what career was suggested? By whom?" The results are revealed in Tables LXXXIX through XCIII.

About ten per cent of the girls and seven per cent of the boys reported such an influence, almost invariably from a teacher. The careers suggested were generally high-level occupations requiring a college education. "Teacher," "journalist," and "clothes designer" were most often mentioned by the girls, "lawyer," "scientist," and "teacher" by the boys. Responses were too infrequent to permit definite conclusions to be drawn, but the emphasis upon professional careers is apparent.

Questions 8A and 8B ask, "Do you admire a famous person connected with the kind of work you want to do? If yes, who is this person?"

About 30 per cent of the girls and 24 per cent of the boys replied that they admired someone (Table XCIV). Girls most frequently cited their classroom teacher and movie stars; boys generally mentioned professional athletes (Table XCV).

In addition, two famous nurses (Clara Barton and Florence Nightingale) were mentioned by girls, as was Wernher Von Braun, the space research engineer, by boys. Both sexes cited Jonas Salk, who developed the celebrated anti-polio vaccine.

TABLE LXXXIX

GIRLS' AND BOYS' RESPONSES TO QUESTION 7A, "HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?"

Response	Girls	Boys	Total
Yes	9.9%	7.4%	8.5%
No	22.2	15.9	18.8
No response	67.9	76.7	72.6

TABLE XC

GIRLS' AND BOYS' RESPONSES TO QUESTION 7B, ("HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?") "WHO?"

Response	Girls	Boys	Total
A friend in school	1.8%	0.5%	1.1%
The fifth grade teacher	.6	0	.3
The school doctor	.6	0	.3
The science teacher	.6	2.1	1.4
The sixth grade teacher	.6	.5	.6
The social studies teacher	.6	0	.3
The teacher	3.7	3.2	3.4
No response	91.3	93.6	92.6

TABLE XCI

GIRLS' AND BOYS' RESPONSES TO QUESTION 7C, ("HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?") "IF YES, WHAT CAREER WAS SUGGESTED?"

Response	Girls	Boys	Total
Advertising manager	0.0%	0.5%	0.3%
Artist	.6	0	.3
Astronomer	0	.5	.3
Author	.6	.5	.6
Biologist	0	.5	.3
Clothes designer	1.2	0	.6
Doctor	.6	0	.3
Journalist	1.2	0	.6
Lawyer	.6	1.6	.8
Model	.6	0	.3
Oceanographer	0	.5	.3
Poet	.6	0	.3
Real estate agent	0	.5	.3
Scientist	.6	1.1	.8
Speech therapist	.6	0	.3
Teacher	1.8	1.1	1.4
No response	90.7	93.1	92.1

TABLE XCII

GIRLS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 7C, ("HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?") "IF YES, WHAT CAREER WAS SUGGESTED?"

Classification		Girls
Group VIII:	Arts and Entertainment	3.6%
Group VII:	General Cultural	3.6
Group VI:	Science	1.2
Group I:	Service	.6
Group II:	Business Contact	0
Group III:	Organization	0
Group V:	Outdoor	0
Group IV:	Technology	0
Level 2		4.3
Level 1		2.5
Level 3		1.2
Level 4		.6
Level 5; Level 6		0
No response		90.7

TABLE XCIII

BOYS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 7C, ("WAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?") "IF YES, WHAT CAREER WAS SUGGESTED?"

Classification		Boys
Group VII:	General Cultural	2.7%
Group VI:	Science	2.1
Group III:	Organization	1.0
Group VIII:	Arts and Entertainment	.5
Group IV:	Technology	.5
Group II:	Business Contact	0
Group V:	Outdoor	0
Group I:	Service	0
Level 2		4.8
Level 1		1.1
Level 3		1.1
Level 4		0
Level 5; Level 6		0
No response		93.1

TABLE XCIV

GIRLS' AND BOYS' RESPONSES TO QUESTION 8A, "DO YOU ADMIRE A FAMOUS PERSON CONNECTED WITH THE KIND OF WORK YOU WANT TO DO?"

Response	Girls	Boys	Total
Yes	29.6%	23.8%	26.5%
No	31.5	28.6	29.9
No response	38.9	47.6	43.6

TABLE XCV

GIRLS' AND BOYS' SIX MOST FREQUENTLY MENTIONED PERSONS IN RESPONSE TO QUESTION 8B, ("DO YOU ADMIRE A FAMOUS PERSON CONNECTED WITH THE KIND OF WORK YOU WANT TO DO?") "IF YES, WHO IS THIS PERSON?"

Response	Girls	Response	Boys
My teacher	3.7%	Ernie Banks	3.7%
Clara Barton	1.8	Jonas Salk	2.6
Debbie Reynolds	1.2	Wernher Von Braun	2.6
Florence Nightingale	1.2	Mickey Mantle	2.1
Jonas Salk	1.2	James Piersall	1.5
Kim Novak	1.2	Ted Williams	1.1
Total	10.3	Total	13.6

Questions 9A and 9B inquire, "Have you read any books or stories about the kind of work you want to do?" Tables XCVI and XCVII reveal the results.

At first glance it seems as if significantly (.01) more seventh graders than eighth graders were influenced by books (Table XCVIII). Fifteen per cent of the former and 31 per cent of the latter replied affirmatively. However, this difference is due to the fact that more eighth graders replied to the question; the difference between those answering negatively is also significant (.01). Although eighth graders generally responded in greater numbers to other items in the questionnaire, no other significant differences were found.

Twenty-one per cent of the sample claimed to have read books or stories bearing on their vocational preference. There was no significant difference between girls and boys responding affirmatively. Girls, however, cited stories about nurses most frequently while boys mentioned books about athletes (Table XCVII).

Questions 10A and 10B ask, "Has a character in a book influenced your choice of work? If yes, name the character."

Seven per cent of the girls and six per cent of the boys answered affirmatively (Table XCIX). Once again, nurses and athletes were most frequently mentioned by the students (Table C).

TABLE XCVI

TABULATION OF DATA FOR QUESTION 9A, "HAVE YOU READ ANY BOOKS OR STORIES ABOUT THE KIND OF WORK YOU WANT TO DO?"

Response	7th Grade	8th Grade	Girls	Boys	Total
Yes	14.7%	30.7%	20.4%	21.7%	21.1%
No	31.7	49.3	41.8	36.0	38.7
No response	53.5	20.0	37.7	42.3	40.2

TABLE XCVII

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED BOOKS IN RESPONSE TO QUESTION 9B, ("HAVE YOU READ ANY BOOKS OR STORIES ABOUT THE KIND OF WORK YOU WANT TO DO?") "IF YES, NAME THE BOOKS YOU HAVE READ."

Response	Girls	Response	Boys
Cherry Ames, Student Nurse	1.2%	Babe Ruth Story, The	1.1%
Clara Barton	1.2	Bill Stern's Sport Stories	1.1
Florence Nightingale	1.2	Hot Rods for Mechanics	1.1
Sue Barton, Student Nurse	1.2	Space Pilots	1.1
Vicky Barr, Air Stewardess	1.2	Perry Mason	.5
Total	6.0	Total	4.9

TABLE XCVIII

COMPARISON OF DATA IN REGARD TO QUESTION 9A, "HAVE YOU READ ANY BOOKS OR STORIES ABOUT THE KIND OF WORK YOU WANT TO DO?"

Response	7th Grade	8th Grade	x^2	Confidence level	Girls	Boys	x^2	Confidence level
Yes	14.7%	30.7%	12.052	.01	20.4%	21.7%	.010	n.s.
No	31.7	49.3	8.251	.01	41.8	36.0	1.165	n.s.

TABLE XCIX

GIRLS' AND BOYS' RESPONSES TO QUESTION 10A, "HAS A CHARACTER IN A BOOK INFLUENCED YOUR CHOICE OF WORK?"

Response	Girls	Boys	Total
Yes	7.4%	5.8%	6.5%
No	35.8	23.8	29.3
No response	56.8	70.4	64.1

TABLE C

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED CHARACTERS IN RESPONSE TO QUESTION 10B, ("HAS A CHARACTER IN A BOOK INFLUENCED YOUR CHOICE OF WORK?") "IF YES, NAME THE CHARACTER."

Response	Girls	Response	Boys
Cherry Ames (student nurse)	1.2%	Tom Swift (amateur inventor)	1.1%
Sue Barton (student nurse)	1.2	Babe Ruth (baseball player)	.5
Anna Pavlova (ballerina)	.6	Jackie Robinson (baseball player)	.5
Perry Mason (attorney)	.6	James Piersall (baseball player)	.5
Vicky Barr (air stewardess)	.6	"Sports stars"	.5
Total	4.2	Total	3.6

Questions 10C and 10D ask, "Has a magazine influenced your choice of work? If yes, name the magazine."

Tables CI and CII indicate that about 15 per cent of the girls and 13 per cent of the boys claimed to have been so influenced. Girls typically mentioned *Seventeen*, *Photoplay*, and *American Girl* while boys cited *Popular Mechanics*, *Popular Electronics*, and *Sports Illustrated*. Both sexes often mentioned *Life* as well.

Questions 10E and 10F inquire, "Has a television or radio program influenced your choice of work?" Seven per cent of the girls and ten per cent of the boys answered affirmatively (Table CIII).

Once again, responses to the second half of the question were few in number, but girls cited "General Electric Theatre," "Playhouse 90," and radio station WJJD (which broadcasts popular music). Boys mentioned "Perry Mason" (an attorney in a television series) and "Medic" (a series about medicine and surgery) (Table CIV).

Questions 10D and 10E ask, "Has a movie influenced your choice of work? If yes, name the movie." Tables CV and CVI indicate the results.

About seven per cent of the girls and three per cent of the boys answered affirmatively. The girls most often mentioned films dealing with actresses ("Stage Struck," "A Star Is Born"). Boys cited films featuring aviators

TABLE CI

GIRLS' AND BOYS' RESPONSES TO QUESTION 10C, "HAS A MAGAZINE INFLUENCED YOUR CHOICE OF WORK?"

Response	Girls	Boys	Total
Yes	14.8%	12.7%	13.7%
No	31.5	31.2	31.3
No response	53.7	56.1	55.0

TABLE CII

GIRLS' AND BOYS' FOUR MOST FREQUENTLY MENTIONED MAGAZINES IN RESPONSE TO QUESTION 10D, ("HAS A MAGAZINE INFLUENCED YOUR CHOICE OF WORK?") "IF YES, NAME THE MAGAZINE."

Response	Girls	Response	Boys
Life	2.5%	*Popular Mechanics*	3.2%
Seventeen	2.5	*Life*	2.1
Photoplay	2.5	*Popular Electronics*	1.6
American Girl	1.8	*Sports Illustrated*	1.6
Total	9.3		8.5

TABLE CIII

GIRLS' AND BOYS' RESPONSES TO QUESTION 10E, "HAS A TELEVISION OR RADIO PROGRAM INFLUENCED YOUR CHOICE OF WORK?"

Response	Girls	Boys	Total
Yes	6.8%	10.0%	8.5%
No	17.9	11.6	14.5
No response	75.3	78.3	76.9

TABLE CIV

GIRLS' AND BOYS' TWO MOST FREQUENTLY MENTIONED PROGRAMS IN RESPONSE TO QUESTION 10F, ("HAS A TELEVISION OR RADIO PROGRAM INFLUENCED YOUR CHOICE OF WORK?") "IF YES, NAME THE PROGRAM."

Response	Girls	Response	Boys
"General Electric Theatre"; "Playhouse 90"	1.2%	"Perry Mason"	2.1%
Radio Station WJJD	1.2	"Medic"	1.1
Total	2.4	Total	3.2

TABLE CV

GIRLS' AND BOYS' RESPONSES TO QUESTION 10G, "HAS A MOVIE INFLUENCED YOUR CHOICE OF WORK?"

Response	Girls	Boys	Total
Yes	6.8%	3.2%	4.8%
No	11.1	8.5	9.7
No response	82.1	88.4	85.5

TABLE CVI

GIRLS' AND BOYS' FOUR MOST FREQUENTLY MENTIONED MOVIES IN RESPONSE TO QUESTION 10H, ("HAS A MOVIE INFLUENCED YOUR CHOICE OF WORK?") "IF YES, NAME THE MOVIE."

Response	Girls	Response	Boys
"Stage Struck"	1.2%	"Compulsion"	1.1%
"The Red Shoes"	1.2	"Fear Strikes Out"	1.1
"A Star Is Born"	.6	"Bombers B-52"	.5
"The High and the Mighty"	.6	"Jet Pilot"	.5
Total	3.6	Total	3.2

("Bombers B-52", "Jet Pilot"), a baseball player ("Fear Strikes Out"), and a lawyer ("Compulsion"). A few of the girls' responses also involved an airline stewardess ("The High and the Mighty") and a ballerina ("Red Shoes").

The specific examples are again too few in number to permit extensive speculation. However, Tables CVII and CVIII combine responses to Questions 8B, 9B, 10B, 10F, and 10H. It is apparent that the mass media influences mentioned were, for both sexes, predominantly concerned with high level careers, many of them in arts and entertainment (e.g., "movie star," "professional athlete"). "Nurse" and "airline stewardess" were also cited by many girls; "doctor," "lawyer," and, to some extent, "scientist" and "mechanic" by boys.

Such popular vocational preferences as "teacher" for the girls and "engineer" for the boys did not seem to be encountered too frequently in the mass media, at least on a basis that left a firm impression.

Tables XXXIV and XXXV give a rough comparison of how occupational groups relate. The students' own preferences (Question 2A) are compared to the responses of influencing agents such as the father's job (Question 5A), the mother's job (Question 5B), teachers' suggestions (Question 7C), celebrities admired (Question 8B), and mass media (Questions 8B, 9B, 10B, 10D, 10F, and 10H).

Only one significant relationship appears when a rank

TABLE CVII

GIRLS' RESPONSES TO QUESTIONS 8B, 9B, 10B, 10F, 10D, AND 10H CLASSIFIED AS TO GROUP AND LEVEL

Classification		Girls
Group VIII:	Arts and Entertainment	3.0%
Group VI:	Science	1.0
Group I:	Service	1.0
Group VII:	General Cultural	.7
Group III:	Organization	.1
Group V:	Outdoor	.1
Group II:	Business Contact	0
Group IV:	Technology	0
Level 1		2.8
Level 2		2.1
Level 4		.8
Level 3		.2
Level 5; Level 6		0
Responses difficult to classify		4.8
No response		89.3

TABLE CVIII

BOYS' RESPONSES TO QUESTIONS 8B, 9B, 10B, 10D, 10F, AND 10H CLASSIFIED AS TO GROUP AND LEVEL

Classification		Boys
Group VIII:	Arts and Entertainment	2.1%
Group IV:	Technology	1.9
Group VI:	Science	1.3
Group V:	Outdoor	.4
Group VII:	General Cultural	.3
Group I:	Service	.3
Group II:	Business Contact	0
Group III:	Organization	0
Level 2		3.6
Level 1		.9
Level 3		.9
Level 4		.9
Level 5; Level 6		0
Responses difficult to classify		3.6
No response		90.1

order coefficient of correlation is utilized: girls' preferences are related to teachers' suggestions. However, this relationship is probably not valid; there is a four-way tie among several occupational groups in regard to teachers' suggested vocations.

The general lack of influence previously attributed to the father's job is again demonstrated. Not only does the relationship between boys' preferences and fathers' jobs lack significance, it is actually negative (-.429). Fathers' occupations generally cluster in Groups II and III (Business Contact and Organization); these groups are near the bottom of the list when the boys' preferences are categorized.

Neither is there a significant relationship between the occupational groups preferred by the boys and those suggested by their fathers (Table XXXV). However, a significant (.05) relationship exists between the boys' preferences and the mothers' suggestions! Perhaps the fathers are too ego-involved in making suggestions to perceive the occupational wishes and desires of their sons.

This hypothesis might also explain the significant relationship between girls' preferences and fathers' suggestions (.01) as well as that between girls' preferences and mothers' suggestions (.05) (Table XXXIV). Not being as ego-involved with their daughters' choice, the fathers may be able to pattern their suggestions in closer alignment with the girls' aspirations.

Although the statistic used for these comparisons gives us only a rough estimate, it is apparent that there is no one-to-one relationship between students' preferences and the most common environmental influences.

III. IN WHAT WORK EXPERIENCES HAVE THE STUDENTS ALREADY PARTICIPATED?

Question 14 asks, "Have you already done or helped anyone do this kind of work?" Table CIX lists the responses.

Twenty-seven per cent of the girls and 11 per cent of the boys claim to have already participated in the type of work they hope to follow as an occupation. This difference is significant (.01) although note should be taken of the large proportion of boys in the "no response" category (Table CX).

Question 15A inquires, "What jobs have you had?" Table CXI demonstrates that "babysitter" is the most common part-time job for girls, "newspaper carrier" for boys.

When the jobs are categorized, almost all fall into the lowest occupational levels (Tables CXII and CXIII). Service occupations are the most generally mentioned by both sexes with many boys finding work in business contact jobs as well. There is no significant relationship between these categories and the occupational preferences for either sex (Tables XXXIV and XXXV). In fact, the relationship for the boys is a negative one (-.210), indicating that their

TABLE CIX

GIRLS' AND BOYS' RESPONSES TO QUESTION 14, "HAVE YOU ALREADY DONE OR HELPED ANYONE DO THIS KIND OF WORK?"

Response	Girls	Boys	Total
Yes	27.2%	11.1%	18.5%
No	35.8	24.3	29.6
No response	37.0	64.5	51.8

TABLE CX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 14, "HAVE YOU ALREADY DONE OR HELPED ANYONE DO THIS KIND OF WORK?"

Response	Girls	Boys	X^2	Confidence level
Yes	27.2%	11.1%	13.949	.01
No	35.8	24.3	2.957	n.s.

TABLE CXI

GIRLS' AND BOYS' NINE MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 15A, "WHAT JOBS HAVE YOU HAD?"

Response	Girls	Response	Boys
Baby sitter	24.1%	Newspaper boy	17.5%
Instructor (art, music, dancing, swimming)	2.5	Mow lawns	10.0
Teacher's helper	2.5	Babysitter	6.9
Hospital helper	1.8	Office clerk; store clerk	4.2
Secretary	1.8	Delivery boy	3.2
Camp counselor; Brownies helper	1.2	Car washer	2.6
Dancer; singer	1.2	Rake leaves	2.6
Model	1.2	Shovel snow	2.6
Telephone operator	1.2	Farm worker; ranch worker	2.1
Total	37.5	Total	51.7

TABLE CXII

GIRLS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 15A, "WHAT JOBS HAVE YOU HAD?"

Classification		Girls*
Group I:	Service	27.4%
Group VIII:	Arts and Entertainment	4.9
Group VII:	General Cultural	2.5
Group III:	Organization	2.5
Group IV:	Technology	1.8
Group V:	Outdoor	.6
Group II:	Business Contact	0
Group VI:	Science	0
Level 6		24.5
Level 5		9.3
Level 4		4.9
Level 1; Level 2; Level 3		1.2
No response		63.6

*Total exceeds 100.0% because some students listed more than one job.

TABLE CXIII

BOYS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 15A, "WHAT JOBS HAVE YOU HAD?"

Classification		Boys*
Group I:	Service	29.8%
Group II:	Business Contact	21.2
Group IV:	Technology	8.5
Group III:	Organization	5.3
Group V:	Outdoor	4.8
Group VI:	Science	.5
Group VIII:	Arts and Entertainment	0
Group VII:	General Cultural	0
Level 6		39.4
Level 5		21.2
Level 4		6.9
Level 1; Level 2; Level 3		2.6
No response		46.6

*Total exceeds 100.0% because some students listed more than one job.

part-time jobs are in somewhat reverse order to the occupational groups they hope to enter as full-time careers.

This lack of relationship between the boys' part-time jobs and their future work is again demonstrated in Tables CXIV and CXV. The nine most frequently mentioned girls' and boys' jobs are compared with the nine most popular occupational preferences.

A rough comparison can be made between most of the girls' responses. "Teacher" is similar to the part-time jobs of "teacher's helper" and "instructor"; so are "nurse" and "hospital helper," "housewife" and "babysitter." Some of the responses ("secretary," "model") are identical.

Few of the boys' occupational preferences, however, have counterparts in the world of part-time work. "Business executive" is somewhat analogous to "clerk" as are "mechanic" to "car washer" and "veterinarian" to "farm worker." Unfortunately, there are no popular part-time jobs which deal with the professional duties listed by most boys as their vocational interests.

This situation was previously indicated in responses to Question 14, when girls were found to have participated more often than boys in the kind of work they wanted to enter. Investigators (426) often report that part-time work can influence an individual's future career. These data suggest that such an influence may be greater in the case of girls than boys.

TABLE CXIV

GIRLS' NINE MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES IN RESPONSE TO QUESTION 2A COMPARED WITH GIRLS' NINE MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 15A

Response to Question 2A	Girls	Response to Question 15A	Girls
School teacher	29.0%	Babysitter	24.1%
Secretary	11.7	Instructor	2.5
Nurse	9.9	Teacher's helper	2.5
Air stewardess	6.8	Hospital helper	1.8
Model	5.6	Secretary	1.8
Clothes designer	3.1	Dancer; singer	1.2
Doctor	3.1	Model	1.2
Housewife	3.1	Telephone operator	1.2
Beautician	1.8	Camp counselor; Brownies helper	1.2
Total	74.1	Total	37.5

Occupational preferences paired with similar jobs:

School teacher	Teacher's helper; instructor
Secretary	Secretary
Nurse	Hospital helper
Air stewardess	
Model	Model
Clothes designer	
Doctor	Hospital helper
Housewife	Babysitter
Beautician	

TABLE CXV

BOYS' NINE MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES IN RESPONSE TO QUESTION 2A COMPARED WITH BOYS' NINE MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 15A

Response to Question 2A	Boys	Response to Question 15A	Boys
Engineer	11.6%	Newspaper boy	17.5%
Scientist	11.6	Mow lawns	10.0
Doctor	11.1	Babysitter	6.9
Professional athlete	7.9	Office clerk; store clerk	4.2
Lawyer	7.5	Delivery boy	3.2
Aviator; jet pilot	5.8	Car washer	2.6
Business executive	4.2	Rake leaves	2.6
Mechanic	2.1	Shovel snow	2.6
Veterinarian	2.1	Farm worker; ranch worker	2.1
Total	63.9	Total	51.7

Occupational preferences paired with similar jobs:

Engineer	
Scientist	
Doctor	
Professional athlete	
Lawyer	
Aviator; jet pilot	
Business executive	Office clerk; store clerk
Mechanic	Car washer
Veterinarian	Farm worker; ranch worker

Questions 15B and 15C ask, "Which job did you like best? Least?" Tables CXVI and CXVII indicate that "babysitter" is the most popular of the girls' occupations, "newspaper carrier" of the boys'.

The environment of the respondents and the jobs available to them are indicated by the second choices. Girls enjoyed working as "instructors" (in art, music, dancing, and swimming classes), boys as office or store clerks. Most junior high school students would not have the opportunity of engaging in this type of work, even if they were qualified.

The jobs cited as most popular were also the least popular, although in smaller proportions. In addition, both sexes mentioned "mowing lawns" as an unpopular job, although neither cited it as a favorite.

Questions 15D and 15E inquire, "Do you have a part-time job now? If yes, what is it?" Tables CXVIII and CXIX record the replies.

Ten per cent of the girls and 12 per cent of the boys responded that they were currently employed; the difference between the sexes is not significant (Table CXX). Once again, "babysitter" and "newspaper carrier" were the jobs most frequently mentioned.

Questions 13A and 13B ask, "Do you think you are fitted for the kind of work you want to do? If yes, why?"

TABLE CXVI

GIRLS' AND BOYS' FOUR MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 15B, "WHICH JOB DID YOU LIKE BEST?"

Response	Girls	Response	Boys
Babysitter	10.5%	Newspaper boy	5.3%
Instructor (art, music, dancing, swimming)	1.9	Office clerk; store clerk	2.1
Secretary	1.2	Babysitter	1.6
Telephone operator	1.2	Shovel snow	1.6
Total	14.8	Total	10.6

TABLE CXVII

GIRLS' AND BOYS' TWO MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 15C, "WHICH JOB DID YOU LIKE LEAST?"

Response	Girls	Response	Boys
Baby sitter	1.2%	Mow lawns	2.6%
Mow lawns	.6	Newspaper boy	2.6
Total	1.8	Total	5.2

TABLE CXVIII

GIRLS' AND BOYS' RESPONSES TO QUESTION 15D, "DO YOU HAVE A PART-TIME JOB NOW?"

Response	Girls	Boys	Total
Yes	9.9%	11.6%	10.8%
No	43.8	42.3	43.0
No response	46.3	46.0	46.1

TABLE CXIX

GIRLS' AND BOYS' THREE MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 15E, ("DO YOU HAVE A PART-TIME JOB NOW?") "IF YES, WHAT IS IT?"

Response	Girls	Response	Boys
Babysitter	8.0%	Newspaper boy	3.2%
Piano instructor; swimming instructor	1.2	Babysitter	2.1
Model	.6	Office clerk; store clerk	1.6
Total	9.8	Total	6.9

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TABLE CXX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 15D, "DO YOU HAVE A PART-TIME JOB NOW?"

Response	Girls	Boys	X^2	Confidence level
Yes	9.9%	11.6%	.281	n.s.
No	43.8	42.3	.048	n.s.

TABLE CXXI

GIRLS' AND BOYS' RESPONSES TO QUESTION 13A, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

Response	Girls	Boys	Total
Yes	78.4%	73.5%	75.8%
No	8.0	11.6	10.0
Mixed response, *i.e.*, "Yes and no."	.6	2.1	1.4
Don't know	3.1	6.9	5.1
No response	9.9	5.8	7.7

Three out of every four students felt they were fitted and mentioned "Because I am good at it" as the main reason (Tables CXXI and CXXII).

Other ability considerations were high for both sexes ("I get good grades," "I am smart"). Such factors as "I enjoy it" and "I am interested in it" were also cited.

Although about the same number of girls as of boys stated they were fitted for their future work, a significant (.05) difference appears when other responses are compared. Almost twice as many boys as girls replied, "No," "Yes and no" or "I don't know." This statistic suggests that more boys than girls are in doubt about their ability as related to their future vocation. It is further evidence that boys are more aware of aptitude and ability requirements. On the other hand, it should be noted that more girls than boys are in the "no response" category; had they answered, the results may have been changed.

When the IEP standard deviation scores are examined, the boys' groups show a greater difference than do the girls' (Tables CXXIV and CXXV). About 84 per cent of the high IEP boys replied they were fitted for their work as compared with 49 per cent of the low IEP boys, a significant (.01) difference. The difference between the percentages giving other responses (eight per cent *vs.* 44 per cent) is also significant (.05).

Of the high IEP girls, 90 per cent replied that they

TABLE CXXII

GIRLS' AND BOYS' SIX MOST FREQUENTLY MENTIONED REASONS IN RESPONSE TO QUESTION 13B, ("DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?") "IF YES, WHY?"

Response	Girls	Response	Boys
I am good at it.	9.9%	I am good at it.	8.5%
I enjoy it.	9.3	I enjoy it.	4.8
I am interested in it.	5.6	I am smart.	3.7
I get good grades.	4.3	I know about it.	3.7
I like children.	3.7	I am interested in it.	2.6
I want to help others.	3.7	I get good grades.	2.6
Total	36.5	Total	25.9

TABLE CXXIII

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 13A, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

Response	Girls	Boys	X^2	Confidence level
Yes	78.4%	73.5%	1.203	n.s.
No, mixed response, don't know	11.7	20.6	4.164	.05

TABLE CXXIV

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 13A, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Yes	90.0%	65.4%	83.9%	48.8%
No	3.3	15.4	9.7	30.2
Mixed response "Maybe," "Yes and no," etc.	0	0	0	9.2
Don't know	6.6	3.8	0	4.6
No response	0	15.4	6.4	6.9

TABLE CXXV

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 13A, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

Response	High IEP Girls	Low IEP Girls	x^2	Confidence level	High IEP Boys	Low IEP Boys	x^2	Confidence level
Yes	90.0%	65.4%	4.141	.05	83.9%	48.8%	8.049	.01
No; mixed response; don't know	10.0	19.2	.014	n.s.	9.7	44.0	5.276	.05

were fitted while 65 per cent of the low group answered affirmatively. This difference is significant (.05) but the deviation between the groups for other responses (ten per cent vs. 19 per cent) is not.

No significant difference exists between the girls' PMA groups for either type of response (Tables CXXVI and CXXVII). Of the high PMA boys, 82 per cent replied that they were fitted for their future work as compared with 50 per cent of the low-scoring boys. This difference is significant (.05) but that for negative responses is not.

It becomes apparent that large numbers of the Skokie students have doubts about their suitability for the work they have chosen. Some may have answered negatively anticipating that a college education was required to make them "fitted" for their type of work. It is the author's feeling, however, that these responses indicate a conflict in the minds of many students--a conflict between their high-level professional aspirations and the recognition that these aspirations will not be easily attained.

IV. WHAT ARE THE STUDENTS' FUTURE EDUCATIONAL PLANS?

Question 1 asks, "Do you plan to go to high school?" Virtually all girls and boys in the sample responded affirmatively (Table CXXVIII). One per cent of the girls and three per cent of the boys replied negatively, but this difference is not significant (Table CXXIX).

TABLE CXXVI

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 13A, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

Classification	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Yes	82.1%	61.9%	82.1%	50.0%
No	7.1	14.3	7.1	33.3
Mixed response "Maybe," "Yes and no," *etc.*	0	0	0	2.8
Don't know	3.6	4.8	7.1	5.6
No response	7.1	19.0	3.6	8.3

TABLE CXXVII

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 13A, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

Response	High PMA Girls	Low PMA Girls	χ^2	Confidence level	High PMA Boys	Low PMA Boys	χ^2	Confidence level
Yes	82.1%	61.9%	1.283	n.s.	82.1%	50.0%	5.744	.05
No; mixed response; don't know	10.7	15.1	.143*	n.s.	14.2	41.7	3.578	n.s.

*Fisher formula used.

TABLE CXXVIII

GIRLS' AND BOYS' RESPONSES TO QUESTION 1, "...DO YOU PLAN TO GO TO HIGH SCHOOL?"

Response	Girls	Boys	Total
Yes	97.5%	95.2%	96.3%
No	1.2	3.2	2.3
No response	1.2	1.6	1.4

TABLE CXXIX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 1, "...DO YOU PLAN TO GO TO HIGH SCHOOL?"

Response	Girls	Boys	X^2	Confidence level
Yes	97.5%	95.2%	.729	n.s.
No	1.2	3.2	.733	n.s.

Questions 16A and 16B. "Do you plan to go to a business or special school? If yes, name the school." Tables CXXX and CXXXI present the replies.

Of the girls, 42 per cent responded affirmatively in comparison with 35 per cent of the boys. Responding negatively were 38 per cent of the girls and 53 per cent of the boys. The former difference is not significant but the latter attains significance at the .01 level.

Many girls apparently planned to enter schools for airline stewardesses, beauticians, and models; some boys planned to attend business and technological schools (Table CXXXI). Some students, however, misunderstood the question which was formulated to elicit non-college replies. "Teachers' college," "medical school," and "law school" were frequent responses.

When the standard deviation groups' responses are compared, significant differences emerge between the IEP boys but not between the IEP girls or the IMA groups for either sex (Tables CXXXIII through CXXXVI). Forty-five per cent of the high IEP boys and 21 per cent of the low IEP boys planned to attend a special school (.05). On the other hand, 39 per cent of the high-scoring boys and 74 per cent of the low-scorers replied they did not plan to attend (.01).

Questions 17A and 17B ask, "Do your parents want you to go to college? If yes, which college?"

TABLE CXXX

GIRLS' AND BOYS' RESPONSES TO QUESTION 16A, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

Response	Girls	Boys	Total
Yes	42.0%	35.4%	38.5%
No	37.6	53.4	46.1
Don't know	9.3	4.8	6.8
No response	11.1	6.3	8.5

TABLE CXXXI

GIRLS' AND BOYS' NINE MOST FREQUENTLY MENTIONED SCHOOLS IN RESPONSE TO QUESTION 16B, ("DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?") "IF YES, NAME THE SCHOOL."

Response	Girls	Response	Boys
Teachers' college	4.9%	Medical school	5.3%
Nursing school	3.7	Law school	3.7
Modeling school	2.5	Art school	1.1
Medical school	1.8	Technological school	1.1
Air stewardess school	1.2	Agriculture school; Forestry school	1.1
Beautician school	1.2	Business college	.5
Junior college	1.2	Junior college	.5
Drama school	.6	Optometry school	.5
Music school	.6	Teachers' college	.5
Total	17.7	Total	14.3

TABLE CXXXII

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 16A, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

Response	Girls	Boys	X^2	Confidence level
Yes	42.0%	35.4%	1.300	n.s.
No	37.6	53.4	8.131	.01

TABLE CXXXIII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 16A, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Yes	30.0%	46.1%	45.2%	20.9%
No	53.3	34.6	38.7	74.4
Don't know	6.6	3.8	3.2	2.3
No response	10.0	15.4	12.9	2.3

TABLE CXXXIV

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 16A, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

Response	High IEP Girls	Low IEP Girls	χ^2	Confidence level	High IEP Boys	Low IEP Boys	χ^2	Confidence level
Yes	30.0%	46.1%	.947	n.s.	45.2%	20.9%	3.864	.05
No	53.3	34.6	1.559	n.s.	38.7	74.4	8.103	.01

TABLE CXXXV

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 16A, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Yes	28.6%	38.1%	39.3%	22.2%
No	57.1	42.9	46.4	69.4
Don't know	3.6	4.8	7.1	2.8
No response	10.7	14.3	7.1	5.6

TABLE CXXXVI

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 16A, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

Response	High PMA Girls	Low PMA Girls	X^2	Confidence level	High PMA Boys	Low PMA Boys	X^2	Confidence level
Yes	28.6%	38.1%	.071	n.s.	39.3%	22.2%	1.513	n.s.
No	57.1	42.9	.673	n.s.	46.4	69.4	2.539	n.s.

TABLE CXXXVII

GIRLS' AND BOYS' RESPONSES TO QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?

Response	Girls	Boys	Total
Yes	91.4%	92.6%	92.0%
No	4.3	2.6	3.4
Don't know	2.5	2.6	2.6
No response	1.8	2.1	2.0

Nine out of ten students replied that their parents hoped they would attend college (Tables CXXXVII and CXXXVIII). There is no significant deviation between the two sexes; 91 per cent of the girls and 93 per cent of the boys answered affirmatively (Table CXXXIX).

When the results of the current investigation are compared with the Roper study (109:2), the findings are similar. Both investigations indicate that there is little difference in parental expectations between girls and boys among parents in above-average socio-economic circumstances. Although the overall proportion of parents desiring a college education for their children is 69 per cent, the figure is much higher for the above-average socio-economic classes. For these parents, 88 per cent hold college aspirations as compared with 92 per cent of the Skokie sample's parents.

In listing the colleges which the parents reportedly favored, two large Illinois schools (Northwestern University and the University of Illinois) elicited the most attention. Other schools mentioned were usually large, well-known institutions such as Harvard and the University of Wisconsin (Table CXXXVIII).

When the IEP girls and boys are compared, there are no significant differences between the high and low groups for either sex (Tables CXL and CXLI). Of the high IEP girls, 100 per cent responded affirmatively in comparison with 88

TABLE CXXXVIII

GIRLS' AND BOYS' RESPONSES TO QUESTION 17B, ("DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?") "IF YES, WHICH COLLEGE?"

Response	Girls	Boys	Total
Air Force Academy	0.0%	0.5%	0.3%
Annapolis Naval Academy	0	1.1	.6
Duke University	0	1.1	.6
Harvard University	0	2.1	1.1
Lawrence College	.6	0	.3
Massachusetts Institute of Technology	0	1.1	.6
Michigan State University	0	1.1	.6
National Teachers College	.6	0	.3
Northern Illinois University	0	1.1	.6
Northwestern University	12.3	10.0	11.1
Ohio State University	0	1.1	.6
Purdue University	0	1.1	.6
University of Chicago	0	.5	.3
University of Illinois	9.3	10.0	9.7
University of Wisconsin	0	2.6	1.4
Wesleyan University	.6	0	.3
West Point Military Academy	0	.5	.3
Yale University	0	.5	.3
Other colleges and universities	4.9	3.7	4.1
Don't know	3.1	3.2	3.1
No response	68.5	58.7	63.2

TABLE CXXXIX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"

Response	Girls	Boys	χ^2	Confidence level
Yes	91.4%	92.6%	.049	n.s.
No	4.3	2.6	.316	n.s.

TABLE CXL

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Yes	100.0%	88.5%	96.8%	86.0%
No	0	7.7	0	4.6
Don't know	0	0	3.2	4.6
No response	0	3.8	0	4.6

TABLE CXLI

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"

Response	High IEP Girls	Low IEP Girls	x^2	Confidence level	High IEP Boys	Low IEP Boys	x^2	Confidence level
Yes	100.0%	88.5%	.293*	n.s.	96.8%	86.0%	.131*	n.s.
No; don't know	0	7.7	.950*	n.s.	3.2	9.2	.118*	n.s.

*Fisher formula used.

TABLE CXLII

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Yes	100.0%	85.7%	96.4%	86.1%
No	0	14.3	0	2.8
Don't know	0	0	3.6	8.3
No response	0	0	0	2.8

per cent of the low IEP girls. The boys' responses (97 per cent vs. 86 per cent) were similar. PMA results were practically identical with the IEP findings (Tables CXLII and CXLIII). Parents of the Skokie sample do not appear to consider mental ability or academic performance when considering the junior high school students' educational future.

Questions 17C and 17D inquire, "Do you plan to go to college? If yes, which college?" Eighty-eight per cent of the Skokie sample (85 per cent of the girls and 91 per cent of the boys) responded affirmatively (Table CXLIV). The schools mentioned again represent the well-known, high-prestige colleges and universities of the nation (Table CXLV).

There is no significant difference between girls' and boys' responses (Table CXLVI) or between high and low IEP and PMA groups (Tables CXLVII through CL). For both the IEP and PMA groups, 100 per cent of the high-scoring girls and boys responded affirmatively as well as about 76 per cent of the low-scoring students. As the low PMA groups represent students with IQs of 100 and below, it is apparent that most of these girls and boys are unrealistic in their aspirations.

The sample's uniqueness is demonstrated once again. Many writers (492) point out that large numbers of bright students fail to attend college. Other studies (334)

TABLE CXLIII

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"

Response	High PMA Girls	Low PMA Girls	X^2	Confidence level	High PMA Boys	Low PMA Boys	X^2	Confidence level
Yes	100.0%	85.7%	.128*	n.s.	96.4%	86.1%	.361*	n.s.
No; don't know	0	14.3	.128*	n.s.	3.6	11.1	.865*	n.s.

*Fisher formula used.

TABLE CXLIV

GIRLS' AND BOYS' RESPONSES TO QUESTION 17C, "DO YOU PLAN TO GO TO COLLEGE?"

Response	Girls	Boys	Total
Yes	84.6%	91.0%	88.0%
No	6.8	3.7	5.1
Don't know	3.7	2.1	2.8
No response	4.9	3.2	4.0

TABLE CXLV

GIRLS' AND BOYS RESPONSES TO QUESTION 17D, ("DO YOU PLAN TO GO TO COLLEGE?") "IF YES, WHICH COLLEGE?")

Response	Girls	Boys	Total
Air Force Academy	0.0%	1.1%	0.5%
Annapolis Naval Academy	0	.5	.3
Columbia University	.6	0	.3
Duke University	0	.5	.3
Harvard University	0	1.6	.8
Lawrence College	.6	0	.3
Loyola University	.6	0	.3
Massachusetts Institute of Technology	0	.5	.3
Michigan State University	.6	1.6	1.1
National Teachers College	.6	0	.3
Northern Illinois University	.6	1.1	.8
Northwestern University	11.1	13.2	12.2
Ohio State University	1.2	1.1	1.1
Princeton University	0	.5	.3
Purdue University	0	1.1	.6
University of Arizona	1.2	0	.6
University of Chicago	0	.5	.3
University of Illinois	10.5	13.2	12.0
University of Michigan	.6	.5	.6
University of the City of Los Angeles	1.2	0	.6
University of Wisconsin	1.2	2.6	2.0
West Point Military Academy	0	.5	.3
Other colleges and universities	3.7	5.0	4.3
Don't know	4.9	3.7	4.3
No response	61.7	51.3	56.1

TABLE CXLVI

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 17C, "DO YOU PLAN TO GO TO COLLEGE?"

Response	Girls	Boys	X^2	Confidence level
Yes	84.6%	91.0%	.701	n.s.
No; don't know	10.5	5.8	1.480	n.s.

TABLE CXLVII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17C, "DO YOU PLAN TO GO TO COLLEGE?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Yes	100.0%	76.9%	100.0%	79.1%
No	0	15.4	0	11.6
Don't know	0	3.8	0	6.9
No response	0	3.8	0	2.3

TABLE CXLVIII

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17C, "DO YOU PLAN TO GO TO COLLEGE?"

Response	High IEP Girls	Low IEP Girls	X^2	Confidence level	High IEP Boys	Low IEP Boys	X^2	Confidence level
Yes	100.0%	76.9%	.371*	n.s.	100.0%	79.1%	.367*	n.s.
No; don't know	0	19.2	.371*	n.s.	0	18.5	.174*	n.s.

*Fisher formula used.

TABLE CXLIX

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17C, "DO YOU PLAN TO GO TO COLLEGE?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Yes	100.0%	71.4%	100.0%	77.8%
No	0	23.8	0	8.3
Don't know	0	4.8	0	11.1
No response	0	0	0	2.8

TABLE CL

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 17C, "DO YOU PLAN TO GO TO COLLEGE?"

Response	High PMA Girls	Low PMA Girls	x^2	Confidence level	High PMA Boys	Low PMA Boys	x^2	Confidence level
Yes	100.0%	71.4%	.010*	n.s.	100.0%	77.8%	.541*	n.s.
No; don't know	0	28.6	.010*	n.s.	0	19.4	.080*	n.s.

*Fisher formula used.

TABLE CLI

GIRLS' AND BOYS' RESPONSES TO QUESTIONS 17B and 17D CLASSIFIED AS TO TYPE OF COLLEGE AND PART OF THE COUNTRY

Classification	Girls' parents' preference	Boys' parents' preference	Girls' preference	Boys' preference
Private colleges	16.1%	18.5%	16.1%	21.8%
State colleges	11.7	17.5	16.1	19.6
Other colleges: city colleges, military academies	.6	1.1	1.2	2.1
Colleges in the central states	26.6	26.4	29.0	37.0
Colleges in other states	1.8	9.0	4.3	7.9

indicate that about 33 per cent of graduating high school seniors plan to attend degree-granting institutions. Of the Skokie group, all the high-scoring students and 88 per cent of the total group hope to attend.

When girls' and boys' responses to Questions 17B and 17D are classified as to type of college and geographical location, some trends emerge that would be worthy of further study (Table CLI). Parents appear to prefer schools closer to home for their daughters than for their sons. Five times as many out-of-the-area colleges were attributed to parents as choices for their sons as for their daughters. When the students mentioned their own college preferences, less than twice as many out-of-the-area colleges were named by boys than girls.

A similar tendency exists for girls' parents to choose private colleges for their daughters in larger numbers than state universities. The division between the two is about equal for their sons. When the students' own choices were listed, both sexes chose private and state schools in equal numbers.

No definite conclusions can be drawn because much of this information is "second-hand" and half the sample did not respond. Additional investigation, however, might produce some statistically significant results.

Question 17E asks, ("Do you plan to go to college?

If yes, which college?") "Why?" A record of the five most frequently cited responses for each sex demonstrates some differences in the stated reasons (Table CLII).

Girls and boys alike often replied, "I like the university," "It has courses I want to take," and "It is a good school." To some degree, these reasons are all intrinsically connected with the school and its courses themselves. The boys' most common response, however, was, "Because it has a good sports team." The girls often replied, "To please my parents." Both sexes sometimes stated, "Because it is near home." The latter factors seem to reflect extrinsic considerations.

Question 18 inquires, "If you do not intend to go to a special school or a college, how do you plan to prepare yourself for the work you want to do?"

About six per cent of the sample responded to this question (Table CLIII). The replies were often vague ("By reading books") or defensive ("I don't need college"). Few of the responses indicated that the students were aware of job training programs and apprenticeships.

Questions 17F and 17G ask, "Do you plan to work to earn money while you are in college? At what kind of work?" About 55 per cent of the girls and 71 per cent of the boys responded affirmatively (Table CLIV) and mentioned a variety of jobs (Tables CLV, CLVI, and CLVII). The difference

TABLE CLII

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED REASONS IN RESPONSE TO QUESTION 17E, ("DO YOU PLAN TO GO TO COLLEGE? IF YES, WHICH COLLEGE?") "WHY?"

Response	Girls	Response	Boys
I like the university.	6.2%	It has a good sports team.	5.8%
It has courses I want to take.	5.6	It has courses I want to take.	4.7
It is a good school.	5.6	I like the university.	4.2
It is near home.	2.5	It is a good school.	4.2
To please my parents.	2.5	It is near home.	2.1
Total	22.4	Total	21.0

TABLE CLIII

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED PLANS IN RESPONSE TO QUESTION 18, "IF YOU DO NOT INTEND TO GO TO A SPECIAL SCHOOL OR A COLLEGE, HOW DO YOU PLAN TO PREPARE YOURSELF FOR THE WORK YOU WANT TO DO?"

Response	Girls	Response	Boys
Read books.	1.8%	Begin work.	2.1%
Go to college later.	1.2	I don't need college.	1.1
Take special lessons.	1.2	On-the-job training.	1.1
Go to lectures.	.6	Study on my own.	1.1
Study on my own.	.6	Take part-time classes.	.5
Total	5.4	Total	5.9

TABLE CLIV

GIRLS' AND BOYS' RESPONSES TO QUESTION 17F, "DO YOU PLAN TO WORK TO EARN MONEY WHILE YOU ARE IN COLLEGE?"

Response	Girls	Boys	Total
Yes	54.9%	70.9%	63.5%
No	26.5	21.7	23.9
Don't know	6.2	4.2	5.1
No response	12.3	3.2	7.4

TABLE CLV

GIRLS' AND BOYS' SIX MOST FREQUENTLY MENTIONED JOBS IN RESPONSE TO QUESTION 17G, ("DO YOU PLAN TO WORK TO EARN MONEY WHILE AT COLLEGE?") "AT WHAT KIND OF WORK?"

Response	Girls	Response	Boys
Salesclerk	3.7%	A part-time job	10.6%
A part-time job	1.8	Anything that pays	6.3
Office worker; secretary	1.8	Office clerk; stock clerk	3.2
Singer	1.8	Stock boy	3.2
Waitress	1.8	Doing odd jobs	2.6
Anything that pays	1.2	Salesman	2.1
Total	12.1	Total	28.0

TABLE CLVI

GIRLS' JOBS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 170, ("DO YOU PLAN TO WORK TO EARN MONEY WHILE YOU ARE IN COLLEGE?") "AT WHAT KIND OF WORK?"

Classification		Girls
Group VIII:	Arts and Entertainment	5.6%
Group II:	Business Contact	4.9
Group III:	Organization	3.1
Group I:	Service	2.5
Group VII:	General Cultural	1.2
Group VI:	Science	1.2
Group V:	Outdoor	0
Group IV:	Technology	0
Level 3		6.8
Level 4		4.9
Level 1		3.7
Level 5		1.8
Level 2		1.2
Level 6		0
"A part-time job"		1.8
"Anything that pays"		1.2
Don't know		6.2
No response		72.2

TABLE CLVII

BOYS' JOBS CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 17G, ("DO YOU PLAN TO WORK TO EARN MONEY WHILE YOU ARE IN COLLEGE?") "AT WHAT KIND OF WORK?"

Classification		Boys
Group III:	Organization	8.5%
Group IV:	Technology	3.7
Group II:	Business Contact	3.2
Group I:	Service	2.6
Group VIII:	Arts and entertainment	1.6
Group VI:	Science	1.1
Group V:	Outdoor	.5
Group VII:	General Cultural	.5
Level 5		6.3
Level 4		5.3
Level 3		4.2
Level 6		2.6
Level 1		1.6
Level 2		1.6
"A part-time job"		10.6
"Anything that pays"		6.3
Don't know		4.2
No response		57.1

between the sexes is significant at the .01 confidence level (Table CLVIII).

When asked to state the type of work, girls generally mentioned clerical, entertainment, sales, and service jobs. Boys frequently replied, "Doing odd jobs" and "Anything that pays." Tables CLVI and CLVII categorize these responses as to group and level.

Boys chose significantly (.01) more low-level jobs than did girls (Table CLVIII). When the occupational groups were ranked and compared to the students' preferred occupations (Question 2A), no relationship was found (Tables XXXIV and XXXV). Once again, the data demonstrate the lack of opportunity the American culture affords young people to experience a preferred type of work before choosing it as a life-time career.

V. WHAT ARE THE STUDENTS' ATTITUDES TOWARD THE COURSES IN WHICH THEY ARE CURRENTLY ENROLLED?

Question 11A asks, "Do you like school?" Eighty-three per cent of the girls and 60 per cent of the boys responded affirmatively (Table CLIX). This difference is significant at the .01 level (Table CLX).

There is no significant difference between the high and low IEP or TMA girls in regard to this question (Tables XLXI through XLCIV). However, 81 per cent of the high IEP boys and 39 per cent of the low IEP boys said they liked

TABLE CLVIII

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTIONS 17F AND 17G, "DO YOU PLAN TO WORK TO EARN MONEY WHILE AT COLLEGE? AT WHAT KIND OF WORK?"

Response	Girls	Boys	X^2	Confidence level
Yes	54.9%	70.9%	9.201	.01
No	26.5	21.7	.442	n.s.
Level 1; Level 2	4.9	3.2	.181	n.s.
Level 3; Level 4	11.7	9.5	.893	n.s.
Level 5; Level 6; "anything that pays"	3.0	15.2	7.719	.01

NOTE: Most of the previous X^2 tests have compared the response category to the total number of girls (162) and boys (189) in the sample.

For this X^2 test, the number of girls and boys responding "yes" to Question 17F was used. Percentages, however, are based on the total number of girls and boys.

TABLE CLIX

GIRLS' AND BOYS' RESPONSES TO QUESTION 11A, "DO YOU LIKE SCHOOL?"

Response	Girls	Boys	Total
Yes	82.7%	59.8%	70.4%
No	10.5	30.2	21.1
Mixed response "Part of it," "Sometimes," "Yes and no," *etc.*	5.6	9.5	7.7
No response	1.2	.5	.8

TABLE CLX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTION 11A, "DO YOU LIKE SCHOOL?"

Response	Girls	Boys	χ^2	Confidence level
Yes	82.7%	59.8%	19.671	.01
No; mixed response	16.1	39.7	17.607	.01

TABLE CLXI

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11A, "DO YOU LIKE SCHOOL?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
Yes	90.0%	61.5%	80.6%	39.5%
No	3.3	26.9	16.1	44.1
Mixed response "Sometimes," "Yes and no," etc.	6.6	7.7	3.2	13.9
No response	0	3.8	0	2.3

TABLE CLXII

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11A, "DO YOU LIKE SCHOOL?"

Response	High IEP Girls	Low IEP Girls	x^2	Confidence level	High IEP Boys	Low IEP Boys	x^2	Confidence level
Yes	90.0%	61.5%	1.579*	n.s.	80.6%	39.5%	10.795	.01
No; mixed response	19.9	34.6	1.315*	n.s.	19.3	58.0	9.589	.01

*Fisher formula used.

TABLE CLXIII

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11A, "DO YOU LIKE SCHOOL?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
Yes	82.1%	52.4%	75.0%	44.4%
No	10.7	33.3	21.4	41.7
Mixed response "Sometimes," "Yes and no," *etc.*	7.1	9.5	3.6	13.9
No response	0	4.8	0	0

TABLE CLXIV

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11A, "DO YOU LIKE SCHOOL?"

Response	High PMA Girls	Low PMA Girls	χ^2	Confidence level	High PMA Boys	Low PMA Boys	χ^2	Confidence level
Yes	82.1%	52.4%	3.750	n.s.	75.0%	44.4%	4.827	.05
No; mixed response	17.8	42.8	2.135	n.s.	25.0	55.6	4.629	.05

school, a significant (.01) difference. The deviation between the PMA boys' proportions of 75 per cent and 44 per cent is also significant (.05).

Perhaps girls are primarily attracted to school by considerations other than their academic performance. Boys have demonstrated, in this study, a greater concern for ability considerations which may account for the difference between their high and low standard deviation groups. In addition, the American society "expects" girls to like and boys to dislike school.

Question 19 asks, "What subjects are you taking?" Table CLXV presents the responses. Students listed their subjects (English, science, etc.) as well as their activities (band, choir, etc.).

Questions 11B, 11C, 12A, and 12B ask, "In what subject do you get your best marks? Your poorest marks? What subject do you like best? Least?" The most frequently mentioned subjects are revealed in Tables CLXVI through CLXIX.

Girls reportedly received their best marks in mathematics, English, science, spelling, and social studies, in that order. Boys mentioned mathematics, science, social studies, physical education, and shop.

Poorest marks were purportedly received by girls in mathematics, social studies, science, and English; by boys in English, science, social studies, and mathematics.

TABLE CLXV

GIRLS' AND BOYS' RESPONSES TO QUESTION 19, "WHAT SUBJECTS ARE YOU TAKING? LIST ALL SUBJECTS AND ACTIVITIES."

Response	Girls	Boys	Total
SUBJECTS			
English	63.0%	42.9%	52.1%
Health	9.9	10.0	10.0
History	16.7	15.9	16.2
Home economics	46.9	0	21.6
Geography	5.6	6.3	6.0
Languages (French, Latin, etc.)	4.9	4.8	4.8
Mathematics	63.0	41.3	51.3
Music	35.8	28.6	31.9
Physical education	48.8	36.0	41.9
Science	61.1	41.3	50.4
Shop	0	33.9	18.2
Social studies	64.8	34.9	48.7
Spelling	30.2	20.1	24.8
Typing	5.6	0	2.6
ACTIVITIES			
Band	21.0	15.3	17.9
Choir	14.2	3.2	8.3
Library period	32.1	23.8	27.6
Study hall	23.5	10.0	16.2
Other subjects and activities	16.7	7.4	11.7
No response	34.6	57.1	46.7

TABLE CLXVI

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED SUBJECTS IN RESPONSE TO QUESTION 11B, "IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS?"

Response	Girls	Response	Boys
Mathematics	17.2%	Mathematics	27.6%
English	16.6	Science	19.7
Science	16.4	Social studies	13.8
Spelling	15.3	Physical education	10.2
Social studies	14.4	Shop	6.5
Total averaged	16.0	Total averaged	15.6

TABLE CLXVII

GIRLS' AND BOYS' FOUR MOST FREQUENTLY MENTIONED SUBJECTS IN RESPONSE TO QUESTION 11C, "IN WHAT SUBJECT DO YOU GET YOUR POOREST MARKS?"

Response	Girls	Response	Boys
Mathematics	25.0%	English	30.1
Social studies	16.9	Science	15.2
Science	16.4	Social studies	13.7
English	13.4	Mathematics	11.1
Total averaged	17.1	Total averaged	17.5

TABLE CLXVIII

GIRLS' AND BOYS' SIX MOST FREQUENTLY MENTIONED SUBJECTS IN RESPONSE TO QUESTION 12A, "WHAT SUBJECT DO YOU LIKE BEST?"

Response	Girls	Response	Boys
English	18.8%	Science	31.2%
Science	18.6	Mathematics	24.2
Mathematics	18.4	Social studies	11.4
Social studies	14.3	Physical education	11.0
Spelling	9.4	Shop	9.6
Home economics	8.0	Spelling	3.0
Total averaged	14.6	Total averaged	15.1

TABLE CLXIX

GIRLS' AND BOYS' FIVE MOST FREQUENTLY MENTIONED SUBJECTS IN RESPONSE TO QUESTION 12B, "WHAT SUBJECT DO YOU LIKE LEAST?"

Response	Girls	Response	Boys
Mathematics	28.1%	English	29.3%
Science	20.4	Science	14.9
Social studies	17.3	Mathematics	13.6
English	12.6	Social studies	12.3
Home economics	2.5	Music	10.0

The lists of favorite and least favorite subjects were similar to those in which students received their best and poorest marks. Girls preferred English, science, mathematics, social studies, spelling, and home economics, in that order. Boys liked science, mathematics, social studies, physical education, shop, and spelling.

Least favorite subjects of the girls were mathematics, science, social studies, English, and home economics. The boys disliked English, science, mathematics, social studies, and music.

A complete tabulation of responses to all four questions appears in Table CLXX. Chi square tests show that significant (.01) sex differences appear when responses to each question are compared. For example, English was the favorite subject of the girls and one in which they received their best marks. English, however, is near the bottom of the list as far as boys' favorite subjects are concerned. These sex differences have also been reported by Cass and Tiedesen (212) and Jersild and Tasch (72;139).

Table CLXXI discloses the correlations between the lists of subjects. All of the girls' lists correlate to a significant degree. Their best-liked subjects correlate significantly (.01) with the subjects in which they received their best marks. Their poorest marks and least-liked subjects also correlate significantly (.01).

Curiously, there is a significant (.01) correlation

TABLE CLXX

COMPARISON OF GIRLS' AND BOYS' RESPONSES TO QUESTIONS 11B, 11C ("IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS? YOUR POOREST?"), 12A, and 12B ("WHAT SUBJECT DO YOU LIKE BEST? LEAST?")

Response	Girls 11B	Boys 11B	Girls 11C	Boys 11C	Girls 12A	Boys 12A	Girls 12B	Boys 12B
English	16.7%	4.16%	13.4%	30.1%	18.8%	2.7%	12.6%	29.3%
History	1.1	.5	.6	.5	.9	1.3	.6	1.3
Home economics	4.6	0	3.2	0	8.0	0	2.5	0
Mathematics	17.2	27.6	25.0	11.1	18.4	24.2	28.1	13.6
Music	4.3	2.2	3.4	6.9	1.1	.7	2.2	10.0
Physical education	5.7	10.2	1.7	2.8	4.3	11.0	.9	2.4
Science	16.4	19.7	16.4	15.2	18.6	31.2	20.4	14.9
Shop	0	6.5	0	.7	0	9.6	0	1.1
Social studies	14.4	13.8	16.9	13.7	14.3	11.4	17.3	12.3
Spelling	15.3	5.8	3.4	5.3	9.4	3.0	0	3.4
χ^2	27.967		24.181		40.592		22.234	
Confidence level	.01		.01		.01		.01	

TABLE CLXXI.

RELATIONSHIPS BETWEEN GIRLS' AND BOYS' RESPONSES TO QUESTIONS 11B, 11C ("IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS? YOUR POOREST?"), 12A, AND 12B ("WHAT SUBJECT DO YOU LIKE BEST? LEAST?")

Response	r	Confidence level
Girls' responses to 11B and 11C	.794	.05
Girls' responses to 11B and 12A	.915	.01
Girls' responses to 11B and 12B	.740	.05
Girls' responses to 11C and 12A	.881	.01
Girls' responses to 11C and 12B	.990	.01
Girls' responses to 12A and 12B	.854	.05
Boys' responses to 11B and 11C	.204	n.s.
Boys' responses to 11B and 12A	.907	.01
Boys' responses to 11B and 12B	.238	n.s.
Boys' responses to 11C and 12A	.162	n.s.
Boys' responses to 11C and 12B	.982	.01
Boys' responses to 12A and 12B	.180	n.s.

between the best-liked and the poorest marks as well as between the best and poorest marks (.05), best marks and liked-best (.05), and liked-best and liked-least (.05). These results indicate a great deal of variability among the girls; similar proportions liked a subject as disliked it. A large number reported good marks in a subject and a similar number reported poor marks.

This variability is not true of the Skokie boys. The only significant correlations are those between the best marks and the best-liked (.01) and between the poorest marks and the least-liked (.01). The boys, therefore, tended to react in a similar fashion regarding their subjects. Their attitudes were more stereotyped than were the girls.

Because of the boys' stereotyped behavior, the author suspects that there may be a discrepancy in some cases between the subjects the boys claimed to have received poor marks in and those in which they actually did do poorly. English, for example, is so universally frowned upon by boys that many of them might have automatically reacted to Question 11C by citing it as their poorest subject. On the other hand, they might have overlooked poor grades in shop and physical education as boys are not expected by society to do extremely poor work in these subjects.

Cultural patterns, then, probably influence these results. In the American culture, girls are expected to like school, boys to dislike it. English, grammar, literature, and reading are generally considered more of a sedentary, "feminine" activity than an active "masculine" activity.

On the other hand, science and mathematics are associated with male superiority. These, therefore, become the boys' favorite subjects. Because it is no disgrace in the American culture for women to enter many "masculine" pursuits, girls often claimed science and mathematics as favorite courses. Because males are discouraged from entry into "feminine" activities, few boys preferred English. Therefore, greater variability exists among the girls in the Skokie sample than among the boys in regard to subject likes and dislikes.

In addition, there may be genetic factors which underlie sex differences in these subject areas.

The standard deviation groups' responses to Questions 11B, 11C, 12A, and 12B are presented in Tables CLXXII through CLXXIX. Tables CLXXX and CLXXXI compare the responses when they are grouped into "academic" (English, history, mathematics, science, social studies, spelling) and "non-academic" (home economics, music, physical education, shop) courses.

In response to Question 11B ("In what subject do you get your best marks?"), 92 per cent of the high IEP girls and 64 per cent of the low IEP girls cited "academic" subjects, a significant (.05) difference. "Non-academic" courses were mentioned by five per cent of the high-scoring girls and 24 per cent of the low-scorers; this difference is also significant (.05).

TABLE CLXXII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11b, "IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
English	23.0%	5.0%	4.3%	3.2%
History	1.2	0	.8	1.2
Home economics	.8	5.0	0	0
Mathematics	22.1	5.4	44.0	21.4
Music	3.3	7.7	1.1	2.3
Physical education	.8	11.5	1.6	10.9
Science	23.3	11.5	27.6	9.2
Shop	0	0	0	13.9
Social studies	15.1	27.5	8.1	12.5
Spelling	6.6	14.8	6.0	6.9
Don't know; other responses	1.0	3.8	3.2	2.3
No response	3.3	7.7	3.2	16.2

TABLE CLXXIII

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11C, "IN WHAT SUBJECT DO YOU GET YOUR POOREST MARKS?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
English	16.6%	17.4%	24.2%	33.4%
History	0	0	0	0
Home economics	10.0	0	0	0
Mathematics	23.3	28.6	8.0	8.0
Music	3.3	1.9	6.4	2.3
Physical education	6.6	0	4.3	0
Science	16.6	13.4	17.2	20.6
Shop	0	0	1.1	0
Social studies	6.6	19.2	12.9	10.0
Spelling	0	7.7	6.4	6.9
Don't know; other responses	3.3	0	9.7	2.3
No response	13.3	11.5	9.7	16.2

TABLE CLXXIV

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 12A, "WHAT SUBJECT DO YOU LIKE BEST?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
English	21.3%	12.8%	7.5%	5.4%
History	1.7	0	0	0
Home economics	6.6	7.7	0	0
Mathematics	26.6	11.5	35.0	27.9
Music	3.3	0	1.6	1.2
Physical education	1.7	7.7	6.0	11.2
Science	24.3	16.8	35.0	18.2
Shop	0	0	1.1	15.9
Social studies	4.3	28.1	12.3	7.8
Spelling	6.6	11.5	1.6	.8
Don't know; other responses	3.3	0	0	0
No response	0	3.8	0	11.6

TABLE CLXXV

IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 12B, "WHAT SUBJECT DO YOU LIKE LEAST?"

Response	High IEP Girls	Low IEP Girls	High IEP Boys	Low IEP Boys
English	13.3%	21.2%	35.5%	34.6%
History	0	0	0	1.1
Home economics	3.3	0	0	0
Mathematics	35.0	30.8	14.5	15.4
Music	0	3.8	9.7	2.3
Physical education	1.7	0	4.7	0
Science	23.3	17.2	9.7	18.0
Shop	0	0	3.2	0
Social studies	10.0	7.7	12.9	8.9
Spelling	0	0	3.2	3.4
Don't know; other responses	10.0	3.8	3.2	2.3
No response	3.3	15.4	3.2	13.9

TABLE CLXXVI

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11B, "IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
English	17.9%	9.5%	11.2%	4.3%
History	1.2	0	.9	2.1
Home economics	7.1	1.6	0	0
Mathematics	20.3	0	28.0	21.3
Music	5.4	1.6	0	.7
Physical education	0	11.9	3.6	6.5
Science	20.3	14.3	34.0	12.5
Shop	0	0	1.8	20.3
Social studies	10.0	23.8	3.1	12.5
Spelling	17.9	27.8	9.8	3.0
Don't know; other responses	0	4.8	0	2.8
No response	0	4.8	7.1	13.9

TABLE CLXXVII

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 11C, "IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
English	7.1%	25.4%	21.4%	28.7%
History	0	0	0	0
Home economics	10.7	0	0	0
Mathematics	14.3	31.0	7.1	11.1
Music	7.1	0	7.1	5.6
Physical education	7.1	2.4	7.1	0
Science	17.9	13.5	8.9	23.1
Shop	0	0	0	0
Social studies	17.9	13.5	23.2	10.6
Spelling	0	4.8	7.1	7.0
Don't know	10.7	9.6	14.3	0
No response	7.1	0	3.6	13.9

TABLE CLXXVIII

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 12A, "WHAT SUBJECT DO YOU LIKE BEST?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
English	16.1%	14.3%	0.0%	3.7%
History	1.8	0	0	0
Home economics	7.1	4.8	0	0
Mathematics	26.8	23.8	33.9	26.4
Music	3.6	0	0	0
Physical education	0	7.2	8.9	5.1
Science	21.4	14.3	41.1	23.1
Shop	0	0	3.6	17.6
Social studies	3.6	19.0	5.4	7.9
Spelling	12.7	11.9	7.1	0
Don't know; other responses	7.1	0	0	0
No response	0	4.8	0	16.7

TABLE CLXXIX

PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTION 12B, "WHAT SUBJECT DO YOU LIKE LEAST?"

Response	High PMA Girls	Low PMA Girls	High PMA Boys	Low PMA Boys
English	10.7%	23.8%	21.4%	27.8%
History	0	0	0	0
Home economics	3.6	0	0	0
Mathematics	26.8	28.6	14.3	11.1
Music	7.1	0	14.3	8.3
Physical education	1.8	0	7.1	0
Science	26.8	16.7	14.3	19.4
Shop	0	0	0	0
Social studies	16.1	16.7	17.9	5.6
Spelling	0	0	7.1	8.3
Don't know; other responses	3.6	0	3.6	2.8
No response	3.6	14.3	0	16.7

TABLE CLXXX

COMPARISON OF IEP STANDARD DEVIATION GROUPS' RESPONSES TO QUESTIONS 11B, 11C ("IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS? YOUR POOREST?"), 12A, AND 12B ("WHAT SUBJECT DO YOU LIKE BEST? LEAST?")

Response	High IEP Girls	Low IEP Girls	X^2	Confidence level	High IEP Boys	Low IEP Boys	X^2	Confidence level
Academic (11B)	91.7%	64.1%	5.012	.05	90.9%	54.3%	9.717	.01
Non-academic (11B)	5.0	24.3	4.544	.05	2.7	27.0	3.840	.05
Academic (11C)	63.3	86.5	3.445	n.s.	68.8	79.1	.693	n.s.
Non-academic (11C)	20.0	1.9	2.442	n.s.	11.8	2.3	.118	n.s.
Academic (12A)	85.0	80.8	.004	n.s.	92.0	60.0	8.413	.01
Non-academic (12A)	11.7	15.4	.001-	n.s.	8.6	28.3	2.701*	n.s.
Academic (12B)	81.7	76.9	.002	n.s.	75.8	81.4	.208	n.s.
Non-academic (12B)	5.0	3.8	.016	n.s.	17.8	2.3	.059	n.s.

NOTE: English, history, mathematics, science, social studies, and spelling are classified as "academic" subjects; home economics, music, physical education, and shop are classified as "non-academic" subjects.

*Fisher formula used.

TABLE CLXXXI

COMPARISON OF PMA STANDARD DEVIATION GROUPS' RESPONSES TO QUESTIONS 11B, 11C ("IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS? YOUR POOREST?"), 12A, AND 12B ("WHAT SUBJECT DO YOU LIKE BEST? LEAST?")

Response	High PMA Girls	Low PMA Girls	χ^2	Confidence level	High PMA Boys	Low PMA Boys	χ^2	Confidence level
Academic (11B)	87.5%	75.4%	2.266	n.s.	87.0%	55.7%	5.547	.05
Non-academic (11B)	12.5	15.1	.165	n.s.	5.4	27.5	3.151	n.s.
Academic (11C)	57.2	88.2	.427*	n.s.	67.7	80.5	.763	n.s.
Non-academic (11C)	24.9	7.0	.092*	n.s.	14.2	4.0	.637	n.s.
Academic (12A)	82.4	83.3	.001-	n.s.	87.5	61.1	5.046	.05
Non-academic (12A)	10.7	12.0	.002	n.s.	12.5	22.7	.234	n.s.
Academic (12B)	80.4	85.8	.045	n.s.	75.0	72.2	.001	n.s.
Non-academic (12B)	12.5	0	.178*	n.s.	21.4	8.3	.015	n.s.

NOTE: English, history, mathematics, science, social studies, and spelling are classified as "academic" subjects; home economics, music, physical education, and shop are classified as "non-academic" subjects.

*Fisher formula used.

A similar tendency is observed on the part of boys. The high IEP boys cited "academic" subjects more often than did the low IEP boys (91 per cent vs. 54 per cent) while the low-scorers mentioned "non-academic" courses more often than the high-scorers (27 per cent vs. three per cent). These differences, respectively, are significant at the .01 and .05 levels of confidence.

The remaining IEP data show a similar trend, although the only other significant (.01) difference is between the high IEP boys and the low IEP boys regarding their preference for "academic" subjects (92 per cent vs. 60 per cent).

When the PMA groups are compared, no statistically significant differences emerge for the girls (Table CLXXXI). There are two significant (.05) differences for PMA boys. About 87 per cent of the high-scorers preferred "academic" subjects as compared with 61 per cent of the low-scorers. In addition, 87 per cent of the high PMA boys claimed to receive their best marks in academic subjects against 56 per cent of the low PMA boys.

Conclusion. Surveying the results of this study, it is apparent that fewer significant differences were found between girls' standard deviation groups than between boys'. In addition, fewer significant differences were found between PMA groups than between IEP groups.

The first development seems to indicate that achievement and ability differences are not as influential regarding girls' vocational and educational interests as they are for boys' interests. The second phenomenon suggests that the abilities measured by the IEP (i.e., academic achievement in the main subject areas) are more influential determinants than those measured by the PMA (i.e., mental ability).

This study also provided information concerning occupational and educational interests, plans, attitudes, and influences on the part of the Skokie girls and boys. Chapter four discusses the implications these findings hold for the students as well as for their teachers, parents, and society as a whole.

Much of present education appears to be operationally based on the assumption, "You can't trust the student. . ."

The approach we have been discussing is based on an assumption diametrically opposed, that "You can trust the student. . ."

If the instructor accepts this assumption or is willing to adopt it as a very tentative hypothesis, then certain behaviors follow. He creates a classroom climate which respects the integrity of the student, which accepts all aims, opinions, and attitudes as being legitimate expressions of the student's internal frame of reference at that time. He accepts the feelings and emotionalized attitudes which surround any educational or group experience. . . .

He relies upon the capacity of the individual to sort out truth from untruth, upon the basis of continuing experience. He recognizes that his course, if successful, is a beginning in learning, not the end of learning.

Carl Rogers

Client-Centered Therapy

CHAPTER IV

CONCLUSIONS AND IMPLICATIONS

Data from the current study suggest that a modification of several home and school practices might be desirable. Before discussing these implications, it might be wise to summarize and review the principle findings of the study.

I. CONCLUSIONS

The problem. This study attempted to answer five questions in regard to the sample investigated.

1.) What are the most frequently mentioned vocational preferences?

2.) What factors do the students perceive as influencing their preferences?

3.) In what work experiences have the students already participated?

4.) What are the students' future educational plans?

5.) What are the students' attitudes toward the courses in which they are currently enrolled?

Procedure. Data accumulated in this study were obtained from 351 seventh and eighth grade girls and boys enrolled in a large Skokie, Illinois, elementary school. Skokie might be described as an upper-middle class suburb of Chicago. The sample not only lives in a higher-than-average socio-economic environment but received higher-than-average scores on the Iowa Every-Pupil Tests of Basic Skills and the S.R.A. Primary Mental Abilities Tests. The 351 students (162 girls and 189 boys) also completed a vocational-educational questionnaire consisting of 53 yes-no and open-ended questions.

Differences between girls and boys and between high and low IEP and PMA groups were investigated with the chi square technique and the *t* test. Relationships between the parents' occupational levels and the occupational levels of the students' preferred vocations were examined with the Pearson product-moment coefficient of correlation. All vocations were categorized according to the Roe occupational classification system.

Findings. Data from this study provided the following answers to the previously stated questions.

WHAT ARE THE MOST FREQUENTLY MENTIONED OCCUPATIONAL PREFERENCES? The most commonly mentioned occupations by girls in the sample were "teacher," "secretary," "nurse," "airplane stewardess," and "model," in that order. Boys' most frequently cited vocational preferences were "engineer," "scientist," "doctor," "professional athlete," and "lawyer."

Girls replied that they had made their vocational decision at the mean age of 11.4, boys at 12.5. This difference is significant at the .01 level of confidence.

High and low groups for the IEP and PMA were derived by finding the mean score for each sex and using those students falling one standard deviation above and below the mean. About as many girls in both high and low IEP groups mentioned medical careers such as nursing. Significantly (.05) more girls in the high IEP group listed teaching careers than in the low group.

About as many boys in both high and low IEP groups cited medical and engineering careers, but significantly (.01) more boys in the high group mentioned vocations in science.

Occupations requiring a college education were selected by significantly (.01) more boys in the high IEP group than in the low group. For girls, there was no significant difference between the high and low groups in this regard.

A comparison of high and low PMA groups produced similar results with two exceptions. There was no significant difference between girls' groups regarding careers in teaching. Furthermore, all IEP differences which were significant at the .01 confidence level were significant in the PMA comparisons at the .05 level.

WHAT FACTORS DO THE STUDENTS PERCEIVE AS INFLUENCING THEIR PREFERENCES? When asked why they intended to follow their preferred line of work, about 25 per cent of both sexes replied, "Because I enjoy it" or "Because I like it." Next in frequency were girls' responses of "It's interesting" and "To help people" and boys' responses of "The pay is good" and "Because my father is one."

Sixteen per cent of the fathers were reported to prefer that their sons follow in their occupational footsteps, and 12 per cent of the boys intended to do so. These proportions, though small, are significantly (.01) larger than in the case of the girls. Few of the latter showed an interest in either their father's or their mother's vocation.

Almost twice as many boys as girls claimed that their fathers had suggested vocations for them (.01). In addition, fathers reportedly suggested vocations for their sons more often than did the mothers (.05).

High IEP girls and boys were more frequently given vocational freedom of choice by their fathers than were low IEP students (.01). This difference was not found to be significant in regard to the mothers of the IEP groups or for either parent when the PMA groups were compared.

There are significant (.01) positive correlations between the occupational levels of the girls' and boys' preferred vocations and the occupational levels of their fathers. A similar relationship (.01) exists between the occupational levels of the fathers' preferences for their sons and the fathers' own occupational levels.

This relationship is not demonstrated in regard to the mothers' occupational preferences for their sons; most of the mothers, regardless of their socio-economic position, preferred jobs for their sons at very high occupational levels.

The mean occupational level of the mothers' preferences for their sons is significantly (.01) higher than the fathers' preference level.

About ten per cent of the sample claimed to have been influenced by mass media in arriving at occupational decisions. The majority of the specific books, movies, and television programs cited were in the vocational fields of professional sports and entertainment.

IN WHAT WORK EXPERIENCES HAVE THE STUDENTS ALREADY PARTICIPATED? About 12 per cent of the girls and 21 per cent of the boys expressed doubts that they were fitted for the kind of work they want to do (.05). When the high and low IEP groups were compared, a significantly (.05) larger number of low IEP boys expressed doubts as to whether they were fitted. This tendency was not statistically significant for the girls in the sample or for the PMA groups of either sex.

Twice as many girls as boys stated that they had already helped somebody do the kind of work they intended to enter (.01).

About ten per cent of each sex responded that they held part-time jobs at the present time. The girls' most frequently mentioned job was "babysitter" while more boys mentioned "newspaper boy" than any other part-time occupation.

WHAT ARE THE STUDENTS' FUTURE EDUCATIONAL PLANS? About the same number of girls and boys (92 per cent) responded that their parents want them to attend college. Of the girls, 85 per cent wanted to attend college and 55 per cent planned to work part-time. Of the boys, 91 per cent hoped to go to college while 71 per cent wanted part-time jobs.

The number of boys desiring a college education is not significantly different from the number of girls. Significantly (.01) more boys than girls expressed an interest in working while in college and in settling for low-level part-time jobs (.01).

There is no significant difference between high and low IEP and PMA groups in regard to parents' aspirations or the students' own college plans. About as many low scoring students as high-scoring students are expected by their families to attend college--and have set this as a goal themselves.

WHAT ARE THE STUDENTS' ATTITUDES TOWARD THE COURSES IN WHICH THEY ARE CURRENTLY ENROLLED? About 83 per cent of the girls and 60 per cent of the boys stated that they liked school (.01).

The girls' favorite subjects were English, science, mathematics, and social studies, in that order. Boys' favorites were science, mathematics, social studies, and physical education. Girls' least-liked subjects were mathematics, science, social studies, and English while boys disliked English, science, mathematics, and social studies. Sex differences regarding subject likes and dislikes are statistically significant (.01).

There is no significant difference between girls' high and low IEP and PMA groups in connection with their liking for school. However, significantly (.01) more of the high IEP boys liked school than the low IEP boys. This difference also exists for the boys' PMA groups (.05).

Both high IEP girls (.05) and boys (.01) preferred academic subjects to a greater degree than did the low IEP students who demonstrated a greater preference for non-academic subjects (physical education, shop, home economics, etc.). This difference also characterizes PMA boys (.05) but not PMA girls.

SUMMARY: More significant differences were found between high and low IEP groups than between high and low PMA groups. More significant differences were found between high and low boys than between high and low girls (for both the IEP and PMA). This suggests that the IEP taps abilities which are of greater influence upon vocational preference than those measured by the PMA. Academic achievement, therefore, is probably more clearly perceived by the students than is mental ability.

The results also suggest that these abilities are more closely tied to vocational and educational interests by boys than by girls. Tyler's discovery (449) that activities are related to ability in the case of first grade boys but not first grade girls is, apparently, substantiated to some degree at the junior high school level.

II. IMPLICATIONS

Vocational preference is influenced by a variety of factors present in the home, the school, the culture, and in the occupational development of the individual himself. Many of these factors could be modified or changed in such a way as to increase the appropriateness of final career choice. It would logically follow that the degree of job satisfaction would be augmented as well.

The home. Some of a child's occupational attitudes have already been molded by the time he begins school. Parents can be of great assistance in stimulating the natural vocational development of young people. Unfortunately, they can also delay this development, obstruct it, or use it to satisfy their own frustrated goals and desires.

PARENTAL PRESSURE: Three important vocational guidance principles which parents could heed are "Know your child," "Help your child know himself," and "As a parent, know yourself" (307). It is difficult to see how a parent can adhere to the first two principles if he violates the third.

It is not the child's welfare a parent has in mind when he decides the son will become a doctor because Grandfather Uriah and Uncle Simon were doctors. The child's needs and desires are not considered when a mother urges her daughter to study dramatics because the mother's acting career had met with failure decades earlier.

After examining the PMA groups' responses, we can only hope that they did not report their parents' wishes accurately. If, however, the responses are valid expressions of parental feelings, it is apparent that many children are being urged to follow occupational goals for which they are not mentally well-equipped. Of the girls with IQs of 100 and below, ten per cent reported that their fathers would like them to become teachers. Of the boys with below-average IQs, 25 per cent reported that their mothers have encouraged them to enter medical fields, law, and engineering.

Even more foreboding, if the Skokie sample reported their parents' aspirations accurately, are the data regarding college entrance. Over 85 per cent of the low PMA groups' parents want their sons and daughters to attend college.

By the time a student has reached the seventh or eighth grade in a school boasting an above-average mean IQ, one would suspect that most rational parents would have at least a vague idea concerning their children's suitability for professional careers and a college education. The data indicate that many of the Skokie sample's parents have not learned this lesson--or, if they have, the parents have not communicated these realistic evaluations to their children.

There is evidence that many of the parents are putting pressure upon their sons and daughters to enter high-level occupations--not because the children are intellectually or academically equipped for these careers, but because parental needs are being served. Presumably, these needs might include the desire to maintain a family tradition, a longing to see one's child enter a vocation which the parent failed to pursue himself, the craving to enhance one's social status by sending his children to a renowned college, or a wish to see the son carry on the father's business.

Support for these presumptions can be found in the responses to Questions 4B and 4D. When asked why their fathers wanted them to enter certain occupational fields, the most frequently given boys' response was "Because he is one himself." When asked the same question concerning the mother's motive, the boys' most common response was "Because my father is one."

Girls usually responded that their parents specified certain jobs for them so that they would "be happy" or because the girl "liked the work." But even here, there were occasional responses of "Because my mother is one," "Because his mother was one," "Because she is one," and "Because she wanted to be one." If the unconscious thoughts of the parents could be plumbed, such responses might multiply in their frequency.

The vocational development of girls and boys would proceed at a more natural pace and with more advantageous results if the parents paid greater attention to their children's abilities and interests than to their own unfulfilled goals and frustrated dreams. Gardner Murphy and Lois Barclay Murphy (488:209) wisely advise fathers and mothers that the best source of information about a child's interests is the activity pattern of the child himself.

> Perhaps in many ways--through all his inarticulateness, his nonverbal communication, his gestures, tears, clenched fist, sleeplessness, or, on the other hand, radiant joy and deep relaxed absorption into himself--he can point the direction which we might give him more of what he seems to need in order to grow in a balanced, resilient, creative way.

CHILDREN'S LITERATURE: Over 20 per cent of the Skokie sample responded that they had read books or stories about the kind of work they want to do. Most of these books, as well as the films, television programs, and magazines cited, involve occupations in the entertainment world or professional sports. Almost all the remaining responses involving mass media are concerned with such "prestige" occupations as medicine and law or such "glamor" occupations as aviation and modeling.

Books and stories covering a wider range of occupational fields are, perhaps, not as readily available as those mentioned in the current study. Nevertheless, parents could provide reading material which would adapt itself to a child's vocational interest of the moment or which might give the young person new ideas about job opportunities available to him.

As the Skokie sample's responses indicate, there are few well-written books covering the lower-level occupations.

This situation is an unfortunate one; students from their earliest years are often imbued with the notion that professional careers are the only ones approved by the culture.

There are a few exceptions to this trend. Such books for young readers as Mike the Moving Man by Hutchison (64) present low-level occupations as being necessary to society and intrinsically satisfying. The moving man is described by Hutchison as possessing an attractive personality, worthy of emulation.

> There never was a happier man than Mike the Moving Man. . . . Everyone liked Mike. Grownups liked him because he was helpful. Children adored him because he was fun. Dogs liked him too. . . . He was a Moving Man and he liked it!

A recent series, the I Want To Be books, covers the entire occupational hierarchy. Written by Carla Greene (48; 49; 50), the series includes such diverse titles as I Want To Be a Dentist, I Want To Be a Restaurant Owner, and I Want To Be an Airline Hostess. Written at about a third grade level, a collection of these books would make a worthy addition to the home or school library.

Another series, written at a somewhat more difficult level, is primarily directed toward boys and their vocational interests. What Does a Civil Engineer Do? and What Does a Jet Pilot Do? by Wells (139; 140) and What Does a Scientist Do? by Zarchy (146) contain well-written descriptions of occupational fields as well as attractive illustrations and accurate diagrams.

Occasionally the young reader's introduction to a vocational field will be made by a comic book. A number of private businesses and industrial firms have described their enterprise by means of these illustrated booklets. In addition, such publishers of comics as the Gilberton Corporation often produce special issues on occupations. Gilberton's Adventures in Science (3) is a successful attempt in this field.

A number of large employers describe opportunities with their organizations in a yearbook named Career (102). Directed toward college graduates, this yearbook includes a calendar informing students when various firms will hold interviews on their college campus.

Some of the most useful career guides for young people have been prepared by encyclopedia editors. The editors of Collier's Encyclopedia (30) wrote an article entitled "You and Your Career" for the 1958 Collier Encyclopedia Year Book; this has since been published separately. Not only are 113 careers described, but sources of further information are listed.

A different approach is taken by the editors of The World Book Encyclopedia who describe their book, A Career-Planning Guide (29), as "a practical means of working together on career problems" for parents and children. Check lists are provided for the parents as well as interpretations of their answers. Emphasis is placed on the children's special abilities, personality characteristics, work habits, and career interests. An especially pertinent chapter is titled, "How To See Your Boy Or Girl As Others Do."

A third encyclopedia, Our Wonderful World, is organized thematically, not alphabetically. Each volume contains a section entitled "Ask Yourself" (83) which directs the young reader's thoughts toward his vocational future.

COLLEGE ENTRANCE: The current study indicates that 92 per cent of the parents were perceived by the students as wanting them to attend college. In addition, 88 per cent of the Skokie sample hoped to attend. The colleges cited were generally large schools in Illinois (University of Illinois, Northwestern University) or well-known out-of-state colleges and universities (University of Wisconsin, Harvard, M.I.T., etc.).

Some experts feel that the term "college" may be so redefined that by 1990 every student with an IQ above 100 will complete a two-year-course with the college label (436). Lynd and Lynd (87:223) remark that in their study of Middletown, every pupil of average intelligence appeared to be shunted toward a college or university. These developments are confirmed by the Skokie sample, most of whom are being directed toward college regardless of their mental ability.

Unless there is a reversal of the trend to inculcate students with the college ideal, many of the low IQ group in the present study will suffer frustration and disillusionment as their college applications are turned down or as they are "weeded out" in their freshman year.

A large proportion of the Skokie sample is characterized by what Hill (285) calls "college proneness." Hill states that the most potent determiners of this proneness are not the ability and desire to succeed in college, but economic advantages, parental aspirations, and family educational traditions. All three determinants are common to the Skokie sample.

To counteract this proneness for the less able students, Hill (285) suggests realistic assessment of the child by his parents and teachers, early educational and vocational discussion, and a school program which encourages the student to "make decisions (about his future) in the presence of the facts."

Aside from college proneness on the part of many less qualified students, another problem emerges from the data of this study. Most of the students citing specific colleges mentioned the best-known and most highly regarded institutions. This situation not only causes admissions problems for the colleges but disappointment for the applicants who have to be turned down. Of those who gain admittance, 60 per cent drop out during their freshman year; many of them chose the wrong school, and they have to start over again--elsewhere (376).

The author can draw no other conclusion from these facts but that college does not primarily represent, for the bulk of the Skokie sample, an institution of knowledge and learning. By and large, students do not attend colleges and universities to expand their intellectual horizons. They attend so that their parents can bask in the reflected glory of having a son at Yale or a daughter at Vassar. They attend because "all the other kids in the neighborhood are going," because it is socially desirable, and because it is the generally recognized "thing to do." Boys know that four extra years of school will pay off in terms of a higher-level, better-paying job. Girls hope that they will acquire a cluster of social graces, a bevy of prominent sorority sisters, and, along with their college diploma, a well-to-do husband. When a university is mentioned in polite conversation, most Americans immediately think of its size, prestige, football team, or reputation for well-dressed scholars. Few have any conception of its academic standing, the ability of its faculty, or its contributions to human knowledge.

Once again we see the dichotomy between intrinsic and extrinsic values. When the Skokie sample was asked why they preferred a certain college, the most frequently mentioned boys' response was "Because it has a good sports team." High on the list for both sexes were the responses "Because it has courses I want to take" and "Because it is a good school." On the other hand, two commonly cited reasons for the girls were "To please my parents" and "Because it is near home."

Even though young Americans are applying for college in ever-increasing numbers, there are many gifted girls and boys who do not go to college at all (299). One of the few encouraging results of this study emerges when the IEP and PMA groups are examined. For the high groups on both tests, the proportion desiring a college education is 100 per cent. Many of these students plan to aim for careers in science, education, and other fields in which national shortages exist.

Along with practices which would encourage youth to understand their capabilities and their potential future as college students, the home could perform another service. Although the "big-name" institutions turned down thousands of applicants for the 1959-1960 term, a recent survey (222) indicates that 260 accredited colleges could have taken at least 36,500 more freshmen than actually registered.

Parents should de-emphasize the "name" and "prestige" of a school and direct a student's attention to what he desires from a college experience. This will encourage the consideration of a wide variety of schools, many of them not too well-known nationally but still capable of meeting the individual's needs. In addition, a greater use of junior colleges, trade schools, and business schools could be encouraged.

College guides such as Karl and Diehl's The College Handbook (75) should be utilized by parents and children.

Unterecker (453) describes the usefulness of these books. They provide information about a large number of colleges as well as suggest definite steps which can be taken by the high school student about to seek college admission.

The flood of college applications is accompanied by varied reactions on the part of colleges. Some institutions are gearing their programs to students of average ability, claiming that education to the limits of one's capabilities is a fundamental goal of the American system. Many universities are raising their academic standards to keep their degrees from degenerating into little more than a social status label (376).

In addition to these efforts, the author feels that the American culture should emphasize the worth and necessity of non-college jobs. If this is not done, many of those young people who do not gain admission to college will join the ranks of dissatisfied workers even though their occupations might be both valuable to society and rewarding to themselves.

Havighurst (506) does not think that the enrollment increase can continue indefinitely without producing employment problems.

> . . . if the colleges should admit students at this rate during the coming decade, there is reason to suppose that college graduates would have difficulty finding jobs in spite of present shortages of trained manpower and the expected growth of the economy.

If Havighurst's prediction is valid, American homes should combine the stimulation of college goals for the talented student with a policy of equal attention and encouragement concerning non-university careers for young people not of college caliber.

The school. The teacher, curriculum, and guidance program with which a student has contact are vital elements in his vocational development. Even if the home has been negligent in fostering the growth of an occupational self-concept, the child can benefit from a well-presented introduction to the world of careers as part of the school program.

THE TEACHER: Questions 7A, 7B, and 7C ask, "Has anyone at school suggested a career for you? If yes, what career was suggested? By whom?" About nine per cent of the Skokie sample declared that someone at school, almost invariably the teacher, had suggested they enter a certain occupation.

It is possible that the responses are somewhat inaccurate in reflecting what the teacher really advised. If correct, the results are somewhat disquieting; the occupations listed are almost all high-level careers requiring superior mental ability and a college education.

The inference can be made that teachers themselves are college-directed and think of their students in these terms. Either the teachers are giving a large number of average-ability students unrealistic goals, or they are

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confining their suggestions to the bright students. Both possibilities are regrettable. The teacher is in an advantageous position and can stress the necessity of various types of work in the American culture. Not only should a teacher encourage a talented youngster to aspire to a challenging job, but he should also help the average or less capable student anticipate a suitable and rewarding occupation.

Arbuckle (178) describes another problem which teachers must overcome if they are to be effective catalysts in a student's occupational growth.

> Many teachers, unaware of the vocational implications of their teaching, have little understanding of the changing occupational patterns and composition of society. At the local level, teachers too often have little realization of just what happens, occupationally, to their children after they leave school. In the Boston area, for example, one of the major employers is Raytheon, yet many teachers operate as if they were either unaware of this fact, or they feel that this has nothing to do with the education of the child.

All too often, the teaching staff is both uninformed and uninterested as to the vocational future of their pupils as well as the occupational outlook in their community and in the nation as a whole.

One area in which the teacher needs a minimum of training to be of help is the providing of occupational literature. The school library should be well-stocked with books and pamphlets of this nature, but individual teachers might also find it useful to have a few general career-planning books in their possession.

Vocational Planning by Endicott (35) is written for students and directs attention to their past successful vocational experiences as indices of present aptitudes. Kitson's books (76; 78) (*e.g.*, *Vocations for Boys*, *I Find My Vocation*) and Wells and Wells' *The Job That Fits You and How To Get It* are also written for high school students.

School libraries should have source books available on the order of the U. S. Labor Department's *Dictionary of Occupational Titles* (165) and Thorndike and Hagen's *10,000 Careers* (130). The school might also subscribe to "Your Future Occupation" or send for the New York Life Insurance Company's career guide series.

Teachers interested in a general introduction to the field of vocational guidance might read Bell's *Matching Youth and Jobs* (8), or Myer's *Principles and Techniques of Vocational Guidance* (98). Familiarity with adolescent development may be gained from Shuttleworth's *The Adolescent Period* (114) which contains a section on vocational interests. A review of current occupational literature is regularly published in the *Vocational Guidance Quarterly* (273) while suggestions for curriculum programs regarding vocations can be found in such sources as Tiedeman and Sternberg's report (445).

THE CURRICULUM: Whether or not a school has a formally organized guidance program, there is a place in the curriculum for vocational activities. As Fagin (249) writes, "The presumed purpose of all education is to develop and guide the interests of students. All interests are of vocational significance, in the sense that they influence vocational choice and vocational satisfaction."

Questions 12A and 12B ask, "What subject do you like best? Least?" Science was the favorite course taken by the boys, while the girls favored English. Boys commonly disliked English, girls mathematics. Except for English, for which there was a clear-cut sex difference, the overlap was considerable. Science and mathematics were high on the list of best-liked and least-liked subjects for both boys and girls.

Perhaps the dislike of science courses in school is one factor which enters into the unfavorable stereotypes of the scientist frequently reported (104; 346). Mead and Métraux (346) feel that these stereotypes can be altered by curriculum changes. More experiments could be introduced into science courses as well as a more skillful use of nature observation. Enthusiastic science teachers would also help modify the adjectives of "dull" and "uninteresting" applied by students to science in the Mead-Métraux study.

George Washington University Professor Joseph Still (118) agrees that the school curriculum, especially in the pre-school years, is a vital factor in developing a more favorable attitude toward science and scientists.

> The best way to get more scientists is not to lure high-school graduates into science but to develop pre-school programs to encourage the imagination of children from homes with low intellectual standards. Most children who attend nursery schools and kindergartens are the children of parents able to encourage them in intellectual directions. To extend this opportunity to all our children would encourage a large *new* group. Children so encouraged will later go into science and other intellectual pursuits *because they want to* and not because *we* want them.

Question 1 asks, "Do you plan to go to high school?" Only two per cent of the sample indicated that they did not plan to attend. This means that virtually all of the group will presently enter what Remaly (378) calls "Ninth Grade--Year of Decision" and what Super (431) refers to as "The Critical Ninth Grade."

It is in the ninth grade that the pupil moves nearer to a single vocational goal. He has to make certain prevocational choices in the form of algebra or general mathematics, and decide whether to take a foreign language. Super's research (431) convinces him that ninth graders are characterized by a readiness to consider problems of vocational selection but a lack of readiness to make a definite choice.

The author feels that this observation must be heeded by those in charge of the school program. Many school systems seem to think that the ninth grader is too young to even speculate about his life's work and offer him little in the way of vocational guidance. Other systems treat the ninth grader as a mature adult and encourage him to make definite decisions regarding life goals. With college entrance requirements becoming more rigid, this approach may seem to be justified. In terms of the developmental status of the child, however, both extremes misevaluate the student's capabilities.

Occupational material suitable for the ninth grade student can often be presented as part of the school curriculum. It would probably be more difficult to integrate this material into other courses than it would be to develop an occupational unit as a separate entity. In the former case, the impetus would rest with the individual teacher. A guidance counselor might be of assistance, a faculty committee might prepare a handbook of suggestions, but the program would succeed or fail on the basis of teacher interest and resourcefulness.

Arbuckle (178) describes one teacher whose originality and initiative produced a model occupational unit for her junior high school homeroom class.

> . . . the area had the biggest snowstorm in 33 years, closing school and disrupting life in the community. The teacher used the storm as an introduction to her topic--jobs created by the storm, jobs hindered by the storm. . . . The children then made a survey of the jobs in the community, with each child interviewing 10 people, using a simple filing-size card to record the information. The class was divided into groups on the basis of interests, and each group studied occupations and occupational opportunities in their field. . . . Each individual in each group chose a particular occupation for a more detailed report and reported to the class on the importance of the occupation, the nature of the work, the trends in the occupation, the working conditions, the personal qualities needed, the preparation required, the opportunities and compensation, the advantages compared with the disadvantages.

Besides specific units, teachers could bring an occupational "flavor" to certain units of history, literature, science, mathematics, social studies, and other subjects. Required readings and reports could stress vocational aspects of the subject matter.

Strang (120:525) suggests that industrial plants be visited as part of the school curriculum, that themes be written about vocations, and that speeches be given by representatives from a number of occupational areas. In regard to the latter suggestion, the author has noticed that too frequently the only careers represented in such a series are high-level professions such as law, banking, and medicine. Rarely are mechanics, farmers, or factory laborers featured, even though the community might employ more of these workers than those in business and the professions.

The prescription of Psychiatrist George Gardner (483:883-884) could be heeded by American schools as they embark on curriculum planning.

> . . . two of the major tasks of the adolescent involve the making of decisions (in many instances lasting and irrevocable decisions) relative to (1) present and future educational programs and (2) the choice of a life work to be followed as an adult. . . . Definite attempts should be made in all schools, through courses in educational and vocational guidance, to acquaint adolescent children with the widest possible knowledge of the greatest number of study and job choices.

The school administrator has a guidance responsibility in this regard. It is his duty to see that the school system offers a solid series of pre-college courses for those students needing pre-requisites in mathematics, science, English, and foreign languages. Woodring (145:160) comments that

> Many bright boys and girls who would like to become scientists or engineers will find the doors closed to them, either because the prerequisite courses are not available in high school or because the prevailing philosophy in high school is one which does not encourage students to take these more vigorous subjects.

There is also a necessity to provide a sound curriculum for the young person who is not college-bound. If the curriculum is completely geared toward college, it will lose its meaning for many of the pupils; the drop-out rate may rise as a result (284).

As far back as 1898, Monroe (355) predicted that the introduction of manual training into the schools would modify the poor esteem assigned to low-level vocations. But Watson (460) feels that further emphasis on the manual arts is desperately needed.

> Every boy and every girl should learn in childhood and the early years of youth the fundamentals of woodwork, metal crafts, crafts, gas engines, and electric motors. A well-educated adolescent should be as much at home in a machine shop as in a library, and he should know something of both regardless of his eventual choice of vocation.

Although the author would not take the extreme position of Watson, he feels that many schools seem to be too completely college-directed just as others do not provide a sufficient stimulus for their gifted pupils.

The author would suggest that occupations courses be more fully utilized by school systems. Experimental studies (336) have demonstrated the significance of these courses for vocational growth and development. These classes generally explore the career world as it relates to the pupils' attitudes, abilities, personality traits, and background. Whether they should be required or elective courses would depend upon the school situation and the policy of the school administrators.

Another affiliate of some school curricula which the author believes to have merit is work experience. Kitson (309) reports that "interest in a vocation can come only through experience" and was one of the first to urge the school to help find part-time work for students. More recently, concurrence has come from Christensen (215), Moore (356), and Stiles (418).

Data from the present investigation points up the need for a fuller utilization of part-time and summer jobs for vocational growth. In response to Question 13A ("Do you think you are fitted for the kind of work you want to do?"), 17 per cent of the Skokie sample expressed doubts as to their qualifications. In response to Question 14, only 18 per cent indicated that they had already helped someone do the kind of work they preferred as a lifetime vocation.

In regard to Question 15A, only 11 per cent stated that they currently held a part-time job. Few of the jobs mentioned bore any resemblance to the future occupations the students preferred.

By suggesting that the school play a greater role regarding students' part-time work, the author does not imply that this program be compulsory, that the school should select the jobs for the pupils, or that the activities be graded or given school credit. Perhaps the program could be handled most advantageously as part of the previously recommended occupations course. Of great value would be discussions of the job, the working conditions, the use of money earned, and the aspects of the work the student would like to incorporate in his future vocation.

Moore (356) feels that part-time jobs would keep poor children off the street and out of the alley. They might also keep well-to-do children out of the country club. This work, he feels, would serve as an antidote to "urbanization and consolidation, crowded cities, long bus rides, and the soft life of modern home appliances. . . ." Stiles (418) adds that

> . . . the school youth of our nation have little opportunity to secure work experience and, as yet, there is little relationship between the academic procedures of a classroom and the practical experiences of an individual outside the classroom.

The author is convinced that too many of the nation's schools suffer from the effects of a "red-brick curtain," a separation of life in the school from life outside the school. For most girls and boys, the more vital, exciting, and meaningful hours of their life are spent away from the books and blackboards, the curricula and classes which typify American schools. Seventy per cent of the Skokie sample responded, in regard to Question 11A, that they like school--not too large a percentage when one considers the huge time investment young people have in this institution.

The reforms of John Dewey (27) were hailed as a remedy for this situation. Unfortunately, Dewey's followers, in the view of the author, often became involved in the transitory and peripheral interests of children, not the crucial issues which affect their present and future development.

An encouraging development, in the author's opinion, is the recent movement toward a closer examination of the student's personal existence and the attempt by some educators to make this existence meaningful to him. Woodring (145), for example, states that the ability to make wise decisions is the sine qua non of the educated man. Education should increase an awareness of individual responsibility.

Fagin (249) encourages teachers to stimulate the development of an adequate self-concept on the part of their pupils. Friedenberg (39:42) agrees, and states that self-definition is an especially crucial task for the adolescent.

> If adolescence is the process of defining oneself through conflict with society, it is helpful if the educational institutions with which the adolescent must deal remain loyal throughout the struggle to the task of clarifying the meaning of experience. For him this amounts, after all, to the same thing: one defines himself by clarifying the meaning of one's experience. . . . If the school is consistent, honest, and sufficiently sophisticated to be aware of important things and coherent about the relations between them, it will be of great assistance in giving the adolescent something on which to build himself.

Kneller (81) applies the principles of existential philosophy to education. Feeling that the fight against depersonalization is the most consequential battle of the era, he blames education for joining in the emphasis on social acceptance, group thinking, and social conformity. Education for adjustment, for happiness, for security is a delusion; progress has been made only by men whose lives were a commitment, men who strived for personal fulfillment. The highest educational goal, continues Kneller, is man's search for himself; the function of the teacher is to liberate the mind so that this truth can be found.

In reading the works of these writers, the author finds himself in substantial agreement with their stress on personal responsibility, self-direction, and self-knowledge. The author regrets that few concrete proposals have been made by these writers which could find their way into the school curriculum. However, once it is decided that education is aimed at the maximum development of the individual rather than toward cooperative adjustment or competitive achievement, certain vocational practices logically follow.

1.) Bright students would be veered toward such careers as science, engineering, and teaching not because there is a national shortage but because these occupations are seen as being personally satisfying to the students involved.

2.) Students would be made aware of their aptitude and ability test scores, how much stock should be placed in these tests, and the implications of their scores.

3.) Psychology courses would be added to the high school curriculum to help girls and boys reach a better understanding of conscious and unconscious motivation. Their own behavior would be explored and discussed as well as that of other people in other cultures.

4.) In discussing the benefits of a college education, school personnel would not stress status rewards. Rather, college would be portrayed as an enriching and exciting intellectual and social experience, a chance for further self-development.

5.) The values of the American culture would not be taken for granted and transmitted intact as "cultural heritage." The teacher would stimulate discussion, dissension, and disagreement in classes stydying the nation's social structure.

6.) Social conflict, organized crime, religious controversy, racial differences, and moral confusion would be as suitable topics for class discussion as English grammar, molecular structure, long division, and the Electoral College. For better or for worse, the student must come to terms with these basic social issues; he is cheated and short-changed if the school does not assist him in this process.

7.) The status quo would not be held sacrosant. Perhaps one reason why so few members of the Skokie sample are interested in careers involving social reform is because the school rarely gives them an indication that anything in society needs reforming.

8.) The development of the student would be regarded as of greater value than the placation of the community. Community recriminations can be expected but will be infrequent if the school program is clearly and adequately explained to local groups and if the teacher avoids biases of his own. (If a group of students proposes that the economic system is unwieldy from the standpoint of economic socialism, the teacher must see to it that the system is not only defended on its own merits but also attacked from the point of view of laissez faire capitalism.)

9.) Students would hold discussions, read books, and write themes regarding their moral code, their future goals, and their philosophy of life. Friedenberg (39:42) comments that

> The school exists fundamentally to provide the young people of a community . . . with a fairly tough and firmly fixed philosophical apparatus for making a certain kind of sense out of their lives. . . . Education has an obligation that transcends its own social functions and society's purposes. That obligation is to clarify for its students the meaning of their experience of life in the society.

VOCATIONAL GUIDANCE: Question 2A asks the students, "What kind of work do you want to do when you finish school?" The replies of both sexes include a disproportionate number of high-level occupations requiring many years of special education and training. Of the low PMA girls, 52 per cent cited jobs requiring college; 47 per cent of the low PMA boys did the same. The author believes that a vocational guidance service would encourage a more realistic consideration of occupational preferences and that junior high school is not too early to initiate such a program.

Super (433) describes vocational guidance in terms of the self-concept.

> Vocational guidance is the process of helping a person to develop and accept an integrated and adequate picture of himself and of his role in the world of work, to test this concept against reality, and to convert it into a reality, with satisfaction to himself and benefit to society.

If an individual's home background and early educational experiences have thwarted his occupational development, a trained counselor can accelerate the student's growth. Hahn and MacLean (52:85) refer to this as a "telescoping process." In this regard the role of the vocational counselor is similar to that of the psychiatrist who often serves as a parent-image to help the patient work through early experiences that have been sources of emotional retardation and psychological frustration.

The rationale for vocational guidance is well-stated by A. S. Thompson (439).

> As a necessary service in a democratic society based on individual freedom of choice, vocational guidance has the function of helping individuals make more effective decisions and plans throughout the long-term process of their vocational development by facilitating a clearer understanding of themselves and their roles in the world of work.

Contrary to the criticism of guidance programs by those who accuse counselors as encouraging "conformity" and "group thinking," it is apparent that vocational guidance at its best is directed toward the individual, his development, and his freedom of choice.

A number of experimental studies have demonstrated the value of guidance programs. Webb (461), for example, questioned a group of college students who had received counseling; 55 per cent had chosen a vocation. Of a non-counseled group, only 36 per cent had made vocational plans for the future. Similar results are reported by other investigators (31:106).

Occupational counseling utilizes a variety of techniques and approaches: personal interviews, psychometric testing, career literature, group activities, and case studies (122; 430). It is extremely important for the counselor to understand the student's view of himself and his world and to use this understanding as the basis for the counseling sessions (332). Carl Rogers (108:48) writes that

> It has seemed clear, from our clinical experience as well as our research, that when the counselor perceives and accepts the client as he is, when he lays aside all evaluation and enters into the perceptual frame of reference of the client, he frees the client to explore his life and experience anew, frees him to perceive in the experience new meanings and new goals.

Data from the current study suggest that school guidance personnel should not overlook the importance of counseling the student who is not college-bound, the importance of boys' obligations to the armed forces, and the possibility of providing a guidance program for the elementary school.

Eight per cent of the Skokie sample responded that they did not want to attend college or were in doubt about their college plans. When asked how they would prepare themselves for their work (Question 18), these girls and boys were rarely able to provide definite answers. Some said they would "take special lessons"; others responded that they would study on their own. The alternatives of on-the-job instruction, training programs, and apprenticeships were apparently not comprehended by most of the group.

The Skokie sample probably contains fewer of these students than the majority of school systems. The vocational future of these girls and boys is as important to them, and to society, as it is to the college-bound. These students are neglected far too often by teachers and guidance counselors. Many schools which help young people select colleges and follow their progress once they have enrolled lack similar placement and follow-up programs for those who take a full-time job after graduating from high school (378; 524).

In response to Question 2A ("What kind of work do you want to do when you finish school?") half a dozen boys mentioned that they would have to fulfill their military obligations before going to work. Although the questionnaire was not designed to investigate plans for the armed forces, this paucity of response indicates that military obligations are perhaps not thoroughly considered by boys as they think of their future.

It is likely that the armed forces will require large numbers of young men for the indefinite future (99). Guidance programs should not overlook this period of a student's life. It is the author's feeling that there are many advantages to fulfilling the service requirement before attending college. The returning serviceman is often more emotionally mature, more highly motivated toward education, and more attentive to the intrinsic rewards of college. There are considerable data which support this hypothesis (107:274) and counselors might do well to stress this alternative.

Question 3 asks, "When did you decide on the kind of work you want to do?" Students' recall in regard to these responses is probably not uniformly accurate. Nevertheless, many girls and boys mentioned such early ages as six, seven, and eight. About one out of every four students claimed they had made their occupational decision while in elementary school (i.e., before the seventh grade).

Regardless of the exact accuracy of these responses, it is evident that many students are seriously considering their occupational future while in the elementary grades. The author feels that this is only one of many indications that guidance programs would be of considerable value in these critical years.

The 1960 White House Conference on Children and Youth (463) stated, as one of its major recommendations,

> That guidance and counseling begin in the elementary school with educational and vocational planning based on early, continuous, and expanded testing and diagnostic appraisal of each child, in order to identify abilities, weaknesses, and problems, mental, physical, and emotional.

Attention to the need for elementary school guidance dates back to national awareness of Soviet technological advances as evidenced by the launching of Sputnik I (409). Knapp (79) states that "Guidance must become an integral part of the total educational experience of boys and girls in the elementary school" and calls for use of sociometric devices, teacher observation, testing programs, questionnaires, case studies, and personal interviews.

Lifton's research (331) demonstrates that elementary school children generally receive a distorted view of the occupational world from their teachers and from their textbooks. Occupations mentioned in the classroom are in "almost exact reverse to the distribution of jobs resulting from census data." He concludes that "If the age old concept of guidance as a life long process is to remain true, greater attention to the role of the elementary school can no longer be delayed."

Guidance programs at other levels are also of critical importance. The author is in agreement with James B. Conant's recommendations (20:44-45) for school guidance activities.

> In a satisfactory school system, the counseling should start in the elementary school, and there should be good articulation between the counseling in the junior and senior high schools. . . . There should be one full-time counselor (or guidance officer) for every two hundred fifty to three hundred pupils in the high school. . . . The function of the counselor is not to supplant the parents but to supplement parental advice to a youngster. To this end, the counselor should be in close touch with the parent as well as the pupil.

In regard to Conant's last point, a 1959 study by Little (333) found, as did this investigation, that many parents were unrealistic concerning their child's occupational future. Little concluded that counseling efforts should be extended to parents as well as to students.

A statement by one of Ruth Strang's counselees (120) demonstrates more directly than a dozen statistical charts, the need for counseling and guidance programs.

> I have a lot of trouble choosing my work. I mean, it seems very hard just to pick one job out of all the rest--for the rest of your life. Maybe after you decide

> what you want to be, you don't like it so much. I feel kind of scared. I'll be getting out of school next year. I might not know what I want to be by then.

__The culture__. From the current investigation, implications can be drawn affecting three crucial aspects of the American culture: job attitudes, women workers, and manpower shortages.

JOB ATTITUDES: The Skokie sample seems to be very status-oriented in their occupational preference patterns. In response to Question 2A, boys preferred jobs with a mean Roe occupational level of 2.25, girls an average level of 2.64. There are no significant differences between these levels and the mean levels of boys' and girls' second and third choices.* In addition, there are no significant differences when high and low IEP and PMA groups are compared. Coming from homes with a fairly high mean occupational level (2.62), the students tended to prefer similar high-income, high-status, high-prestige vocations.

An additional indication of this home influence emerges when students' preferences and parents' occupational levels are correlated with significant results. Although girls and boys do not prefer, in large numbers, the same __type__ of job as their parents, they usually aspire to the same __level__ of job--or one somewhat higher.

Unfortunately, many pupils allow status considerations to exert a greater influence on their vocational preference than aptitude considerations. As Jersild (69:519) writes,

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*There is, however, a significant difference between the boys' mean occupational preference level and that of the girls.

> One complication here is the pressure of conventions and parental ambitions, and of pernicious traditions concerning "high-brow" and "low-brow" occupations. Children somehow get the notion quite early that it is more honorable to head their ambitions toward the learned professions. As a result, when children express their occupational preferences, they are likely to be considerably out of line in a large percentage of cases with what the child eventually will be able to achieve or would find most satisfying.

Steckle (117:264) attributes this situation to cultural attitudes. Referring to high school students, he writes that

> In their Hollywood-clouded minds, no one who must wear overalls on the job amounts to anything. . . . This attitude, of course, but reflects the general feeling within our society that working with one's hands is undesirable, inglorious, and to be avoided if at all possible.

The school, the home, and the community could do a great deal to change this cultural pattern by revising attitudes and beliefs regarding vocational prestige. In the words of Davidson and Anderson (24:175), "The American people must divorce personal culture and occupational status." Unfortunately, these agencies are presently reinforcing, not alleviating, the emphasis upon high-level occupations for all youth, regardless of ability (117:265).

WOMEN WORKERS: Girls in the Skokie sample seem to be career-oriented in their consideration of the future. Only three per cent, in response to Question 24, listed "housewife" as their occupational preference. "Housewife" was mentioned by two per cent as their second choice and four per cent as their third choice. Perhaps the questionnaire was not designed to tap the intent of those who only intend to work until they are married. Still, the modicum of attention given a career as wife and mother is noteworthy.

These results tally with the nationwide trend for women to enter full-time employment, even while married and raising children. Twenty per cent of the mothers with children under six and thirty per cent with children under 18 are full-time workers (162:10). Many investigators (107; 458) have called for a more intensive study of marriage-career patterns for women.

The author suspects that the occupation of a housewife does not carry with it the social status, glamor, and prestige that characterize many other occupations for women. Work around the house is felt by many women to be unrewarding, unchallenging, and not conducive to maximum individual development. On the other hand, a close look at a housewife's duties indicates that they must combine the skills of a homemaker, budget director, cook, chauffeur, seamstress, businesswoman, buyer, party-giver, committee-member, and child psychologist. She must be a companion, housekeeper, and lover for her husband and perform an additional variety of roles in regard to her children, neighbors, and community. The low status assigned by many to a housewife's duties springs from cultural attitudes rather than from the tasks themselves.

When the high IEP and PMA groups were compared to the low IEP and PMA groups, significantly more of the high girls and boys were found to have mothers who are housewives only. This difference may be a socio-economic one, although this is open to doubt because of the high-level jobs held by most of the fathers in the sample. The author feels that further investigation of this situation might indicate that, for many women, employment outside the home has a number of economic and psychological benefits in the early years of marriage or after the children have grown into maturity. Between those periods of time, however, the author suspects that the mother's full-time employment has a deleterious effect upon her children, her husband, and upon the satisfaction of her own personal needs.

MANPOWER SHORTAGES: Data from the current investigation is both encouraging and disheartening in regard to many current local and national shortages. The three most frequent girls' and boys' responses to Question 2A ("teacher," "secretary," "nurse," "engineer," "scientist," "doctor") all happen to be in fields needing additional workers. Unfortunately, many of the students making these responses do not have the ability to successfully complete the training and education required for most of these jobs.

Some writers feel that teachers often hinder rather than help a student's entrance into a suitable occupational field. Lynd and Lynd (87:223) describe how the increase in high-level technical jobs has motivated some teachers to induce every boy who is "good in mathematics" to go into engineering. At the present time, many girls are being urged to become engineers (479:16) and it is pointed out that Soviet women commonly enter this occupation (353). The author is opposed to both of these measures. More than mathematical aptitude is required for success in engineering; an increase in the number of female engineers might complicate and confuse the sex role of many of them, especially if they are wives and mothers.

A more sensible answer to the problem of gaining more engineers, teachers, scientists, and trained workers in other fields, would be an increase in vocational guidance facilities. Not only can the school do more to meet local and national shortages, but community agencies have an important part to play. Bell (8:266) reports that very few communities incorporate vocational guidance centers within the sphere of their activities. Mitchell (353) suggests that school counselors work in closer liason with community agencies. In addition, the role of public employment services and vocational education programs could be enlarged by the community with beneficial results (162:53, 56).

Serious though the problem of manpower shortages may be in America, the development of the individual must still take precedent. Students should not be directed into scientific, medical, and educational fields just because a need exists for these workers.

Preoccupation with these fields often tempts the school to neglect students with artistic, outdoor, computational, and social service interests. One's job, in the words of Hamrin and Paulson (54:288), "must give him as much opportunity for initiative and imaginative activity as his personality requires. It must give him a feeling of dignity and personal worth." And if it helps to relieve a critical manpower shortage, so much the better for both the individual and his society.

The Individual. All of the previously mentioned factors affect individual lives to some degree. Of special pertinence, however, are the implications this study carries in regard to realism of occupational preference, identification with adult workers, and the gamut of individual differences.

REALISM OF OCCUPATIONAL PREFERENCE: The appropriateness of vocational selection has long been a subject of investigation. One method of approach is the comparison of occupational interests with available job openings; Lehman and Witty (324), for example, found only negative relationships between the number of high school aspirants for certain occupations and the number of employed workers in these fields. Similar results have been reported by other investigators (263; 403).

Another approach is the comparison of the individual's aptitudes with the ability requirements of his preferred occupation. This method has been followed by DiMichael (234), Lockwood (335), and Fryer (40) who concluded that students are interested in occupations for which they have sufficient ability only about one half of the time. Additional research indicates an association between job dissatisfaction and the gap between ability and vocational selection (257; 261).

Girls in the present study seemed to select vocations with a greater possibility of absorbing applicants. Boys, on the other hand, appeared to take their abilities into account to a greater extent when making a vocational selection. For both sexes, occupational realism is an individual not a group phenomenon. More adequate guidance programs would enlighten both sexes as to their abilities and aptitudes as well as the available openings in specific fields.

IDENTIFICATION: About 12 per cent of the boys and less than two per cent of the girls in the Skokie sample expressed an interest in the same vocation held by their father. An interest in the mother's occupation was cited by one per cent of the boys and four per cent of the girls. In addition, a small percentage indicated that a friend or relative had inspired them (Questions 2A, 5A, 5B, and 6B).

On the other hand, 24 per cent of the boys and 30 per cent of the girls replied, in response to Question 8A, that they admired a famous person connected with the kind of work they wanted to do. These results suggest that vocational identification, when it occurs with this sample, takes place more frequently with a person outside the home than with a parent, friend, or relative.

In many cases, the identifications are unrealistic, involving sports heroes or movie stars. This indicates that the American culture does not provide youth with sufficient numbers of heroes and ideals in a wide variety of occupations.

Among the twelve most popular personalities, only five were not in sports or in films. Of these five, only two, Jonas Salk and Wernher Von Braun, are contemporary personages. The others, Clara Barton, Florence Nightingale, and "my teacher," suggest that current leaders in nursing and teaching are not likely to be well-known or to influence young people's vocational preference.

The same criticism could be made of the books, stories, magazines, television programs, radio programs, and movies mentioned in response to Questions 9 and 10. Most of the replies intimate that professional athletics and the entertainment world exert more influence than all other occupational fields combined.

The decline of the father as an influential figure for occupational identification can be explained in several ways. Many sons have never seen their father at work and have little idea as to how he earns his living. Fathers are often engaged in work that is too complex and too far divorced from their sons' phenomonological world to make any sense to them.

Most fathers engage in work that seems dull and unexciting to their sons, work that lacks the physical, muscular, and motor tasks characteristic of young boys' interests. The fathers most commonly work in factories or offices, performing either routine mechanical duties or incomprehensible paper work. Their sons are highly kinetic creatures; they want to run, jump, throw, climb, and test their developing skills against the physical environment.

Jobs calling for this type of dexterity are fast disappearing in modern society. Professional sports is one of the few fields open in which boys can find a suitable male model, hence the overselection of "baseball player," "basketball player," or "football player" by the Skokie boys.

Similarly, girls' interests in glamor on the one hand and service on the other, are matched by few occupations of mothers in the current study.

Karl Menninger (93:161-162) mentions a final reason for the low rate of father-son occupational inheritance. The unconscious reaction of the son to his father's attitude is an important variable.

> When the conscious identification with the father in the selection of the father's profession will appear to be positive, there will be negative valences in the unconscious and vice versa. . . . Similarly many a son who disappoints his father by what appears to be an aggressive rejection of the parental hopes is unconsciously deterred by love of the father, or by the fear of entering into competition with him. It reminds one of the parable of Jesus about the two sons, one of whom said quickly and politely, "I go, sir. I do your bidding," but went not; while the other said, "I will not, I refuse to obey," but did.

Menninger (93:162) adds that unconscious reactions toward the mother and her vocational wishes for her son also influence his choice.

INDIVIDUAL DIFFERENCES: There is some suggestion in this data that occupational interests fall into two general categories. A vocation may be intrinsically appealing as in the case of a boy who enjoys playing with his chemistry set and desires to become a scientist. A vocation might be extrinsically desirable as in the case of a boy who cites medicine as his goal because the local surgeon is the wealthiest man in the neighborhood. Two students might cite the same future job but be motivated by different factors. Furthermore, both intrinsic and extrinsic reasons might play an important role for certain young people. These are important distinctions of which the parent, teacher, and employer should be aware.

Another difference regarding vocational interest is the depth and degree of emotional feeling associated with that interest. Strong (424) emphasizes the importance of persistent attention, meaningfulness, and feeling tone, an observation also made by William James (68:403). The author feels that further investigation would demonstrate that permanence of interest is related to the amount of emotional investment as well as the intrinsic quality of the interest.

The current investigation sheds little light on such subtle factors as those stated above; care must be taken, therefore, in applying the results of this study to individual cases. The author has warned against the encouragement of professional careers for low-IQ students; occasionally, however, such a student will do extremely well because of superior ambition or because of an incorrect assessment of his ability. The author has disparaged the parental pressure evident in many American homes; sometimes, though, a student will attain a high position in society and thank his parents for inciting him. David (487:255) remarks that "It would have been an exceptional vocational counselor who would advise Demosthenes to carry out his ambition to become an orator. And very few would have encouraged the delicate Roosevelt to join the Rough Riders."

The author is in substantial agreement with Berdie's suggestions (192) regarding society's responsibilities to the individual student.

1.) Every individual should be given the opportunity to obtain training at the maximum of his capacity.

2.) Every person should be given an opportunity to have full knowledge concerning his capacities and potentialities and to decide for himself the extent to which they will be utilized.

3.) The community must make available to an individual those experiences and situations which will give him full opportunity to appreciate his own potentialities and to realize the satisfaction that can be derived from their fulfillment.

4.) Society must provide education and training to persons at all levels of ability and skills, not only to a few selected leaders.

5.) Society must encourage within its members broad diversity of talents and skills and eventually provide equal opportunities to persons developing skills in the sciences, the arts, humanities, government, and the social studies.

Murphy and Murphy (468;216) add that society should modify its concepts of "normality" so that individuals will feel less self-conscious and embarrassed by relative weaknesses in one or more areas. This modification would encourage them to develop according to their individual capacity.

As parents, teachers, and counselors work with individual children, they cannot deal in stereotypes or apply research results indiscriminately if the fullest contribution to the students' development is to be made. Murphy and Murphy (468;216) describe the situation in eloquent terms. "Children vary beyond all possibility of adequate description, and there is no likelihood that in our generation we shall know how to set free the potentials of each."

I am myself reminded that we are not all alike; there are diversities of natures among us which are adapted to different occupations. . . .

And, if so, we must infer that all things are produced more plentifully and easily and of a better quality when one man does one thing which is natural to him and does it at the right time, and leaves other things.

Plato
The Republic, *Book II*

CHAPTER V

SUGGESTIONS FOR FURTHER RESEARCH

Before suggesting research possibilities for future investigators, the author would like to describe two studies of his own for which the data has already been collected.

One of these is a follow-up study which was executed with the same group of students used in the current study. Six months after the Skokie sample had filled in the vocational-educational questionnaires, the author administered a check list. This list contained all the vocations mentioned previously in response to the open-ended question 2A, "What kind of work do you want to do when you finish school?" The students were asked to indicate their first, second, and third choices.

In addition, they were asked to rank a list of ten school subjects in the order of their preference. College plans were the subject of a final section of the check list.

Preliminary investigation of the data indicates that college plans are very stable and subject rankings are fairly stable after half a year. Vocational preferences, however, are unstable; a large proportion of the junior high school students mentioned different jobs than they had cited as their first choice six months previously. This tendency seems to be more typical of the boys in the sample than of the girls.

Instead of assigning the administration of the instrument to the classroom teacher (as was done with the vocational-educational questionnaires), the author handed out the check lists himself, read the directions, answered pertinent questions, and inspected each check list as it was completed. In this manner, "don't know," "incorrect response," and "no response" categories were completely eliminated.

The author intends to compare these results with the IEP and PMA test scores. It will be of interest to see whether those students making high scores are more or less consistent in their vocational and educational interests than those making low scores. Further follow-up investigations of the same group would also be of value.

A second area of investigation involves the mother's occupational level. This statistic is to be correlated with the students' IEP and PMA scores. Previous research (58; 86) has demonstrated a positive correlation between the father's occupational level and the child's mental ability and academic achievement. The relationship between the mother's job and the child's test scores, however, has been overlooked. As the number of working mothers increases in the United States, so does the importance of assessing the connection between the mother's job and her child's aptitude and performance.

I. TECHNIQUES OF STUDY

Data from the present investigation suggest a number of procedural techniques which would probably prove useful. The current study demonstrates the need for the testing of experimental hypotheses suggested by vocational theory. Although the study was not steeped in theory at its onset, it partially confirmed several hypothetical statements by a number of authors.

The large number of students falling into "don't know," "incorrect response," and "no response" categories, suggests that questionnaire phraseology could be improved and clarified. It also suggests that interview techniques might secure more complete and more accurate data.

The use of experimental hypotheses. The author strongly feels that most of the research in the field of occupational interest has been initiated without sufficient recourse to vocational theory. Fifty years ago there was an excuse for this situation as few articles and books had been published in the area. Now that several prominent writers have speculated upon the course of vocational development, hypotheses can be formulated and tested to substantiate or disprove these theories.

LEONA TYLER: The work of Tyler (449) is corroborated by many of the current study's findings. It will be recalled that Tyler discovered boys' childhood activities to be more closely associated with mental ability than girls' activities. When the author examined the vocational and educational interests of junior high school boys and girls, a similar phenomenon appeared. High IEP and PMA groups often responded differently from low groups in the case of boys, less often in the case of girls.

Senior high school and college students could be studied to see if the pattern still persists. Senior high school students taking pre-college courses could be compared with those in other curriculum programs. Perhaps there would be less difference among the mean ability scores and achievement levels of girls in the various groups than of the boys.

At the college level, ability tests could be administered to "career-oriented" and "housewife-oriented" women. Previous research (28; 292) suggests that personality and family background might be more crucial variables than ability or academic performance.

ELI GINZBERG: When the 351 students in the Skokie sample were asked why they preferred a specific occupation, many of them listed intrinsic reasons (*e.g.*, "I like the work"), others cited extrinsic factors (*e.g.*, "It pays well"). Ginzberg (46:208) divides people into "work-oriented" and "pleasure-oriented" categories. Job satisfaction studies (261; 290) consistently indicate that the lower socio-economic classes are more "pleasure-oriented" in their occupational outlook.

We could hypothesize, therefore, that students citing intrinsic reasons would typically come from higher socio-economic backgrounds while those mentioning extrinsic reasons would more frequently come from lower backgrounds.

The current study attempts to evaluate the conscious reasons for vocational preference by a single, open-ended question. Perhaps a personal interview, check list, or projective technique would be better suited for testing the proposed hypothesis in some future study.

ANNE ROE: The use of Roe's occupational classification categories for the present investigation, demonstrates the method's value. It can be used to categorize such diverse responses as students' preferences, parents' vocations, students' part-time jobs, teachers' suggestions, and mass media content. With a larger sample, an investigator would have more data in these categories than the present author had available. The relationship between such variables as characters in a book and fantasy vocational preferences, among others, could be adequately investigated.

Roe (107:153-248) feels that intelligence, education, and socio-economic status are more closely associated with occupational level than they are with occupational group. Group, however, is supposedly more in alignment with interests and attitudes. Roe has done some research regarding this hypothesis but it has not been positively demonstrated. It might, therefore, serve as a basis for a wide number of provocative studies done with students of various ages and backgrounds.

DONALD SUPER: Vocational development, according to Super (154:47; 433), is primarily the implementation of a self-concept. The current study suggests that influences upon this developing self-concept in junior high school may be somewhat different in the case of girls as compared with boys. It is possible that recognition of aptitudes plays a smaller part in the girls' vocational self-concept.

It is also possible that a boy's idea of himself as a future doctor is based less upon recognized ability than a boy's thoughts of himself as a potential scientist. The hypothesis could be tested that the greater the appeal of extrinsic rewards to an individual, the less consideration will be given to his (or her) abilities.

A similar hypothesis, stated in chapter three, is that the higher a professional occupation is perceived by junior high school students to rank in social and financial rewards, the higher the percentage of low-ability students that will prefer it. The lower a professional occupation is perceived to rank in social and financial rewards, the fewer low-ability students it will attract.

These hypotheses could be tested in several ways. A group of junior high school students could be asked to write descriptive paragraphs about such occupational fields as engineering, teaching, and science. Alternatively, this information could be gleaned in an interview and recorded. The content of these statements could be explored to see how frequently references to ability requirements are made. The responses could be compared with the students' vocational preferences and scores on aptitude tests.

In addition, students could be asked to describe what type of work they think they will be doing in their chosen vocation. It is possible that students choosing careers because of extrinsic reasons will have a less accurate picture of that career than those attracted by intrinsic factors.

It is regrettable that the present investigation was not more solidly rooted in a theoretical framework. Nevertheless, many of its results seem to stimulate experimental designs which can test the hypotheses of contemporary vocational theorists.

The use of clearer phraseology. The vocational-educational questionnaire used in the present study seemed to be easily understood by most of the junior high school students investigated. Furthermore, the questionnaire inquires as to part-time job preferences and mass media influences, two quantities which have rarely been tapped. It also asks for second and third vocational choices, permitting the investigator to observe the gamut of the student's perceived possibilities.

Although it is a well-constructed instrument, future investigators should realize that this vocational-educational questionnaire is not without its faults. The instrument could be improved by the revision of two questions and the omission of one.

Question 19 ("What subjects are you taking?") adds several extra minutes to the time required for completing the questionnaire. Such information could be more easily obtained by checking school records. This procedure would probably be more accurate as well; 47 per cent of the Skokie sample did not even bother to respond to this question. It could be omitted from future administrations of the instrument with no great loss in information and a saving in time.

Question 17A ("Do your parents want you to go to college?") would be more illuminating if it inquired as to the father and the mother separately. In Skokie, the parents would probably think alike but some pertinent differences might be found if lower socio-economic families were studied.

Question 16A ("Do you plan to go to a business or a special school?") was frequently misunderstood. The question supposedly refers to business, trade, and vocational schools but the Skokie sample interpreted it to cover junior college, law school, and medical school as well. It became, for many of the subjects, a duplication of Question 17C, "Do you plan to go to college?"

Question 16A should probably follow, not precede, Question 17C. It could be phrased to read, "If you do not plan to go to college, do you intend to go to another type of school? If yes, name the school."

These comments all seem pertinent to future investigators either using the questionnaire in its original form or making some adaptation of it.

If the questionnaire were adapted, an interesting distinction could be made between Questions 2A, 2C, and 2D. Instead of merely asking for first, second, and third vocational preferences, the instrument might ask the student to discriminate among probability, possibility, and fantasy. This could be done by utilizing such phraseology as, "What kind of work will you probably do when you finish school?" "What kind of work would you like to do when you finish school?" "If by some magic, you could be anything you wanted, what would you do when you finish school?" This technique would probably glean a variety of interesting and valuable data.

__The use of structured interviews__. Occupational research (154:102-103) indicates that the interview is a more thorough and accurate measure of many vocational interests than the questionnaire and similar instruments. Not only can more extensive information be gathered, but students will often make statements to a friendly and accepting interviewer that they would hesitate to put into writing.

It would be interesting to inspect, for example, the responses to Question 11A ("Do you like school?") if the question were asked by an outside interviewer, not by a questionnaire administered by the classroom teacher. Answers to Questions 13A and 13B ("Do you think you are fitted for the kind of work you want to do? Why?") might also be more frank and more complete.

For the interview technique to be applied to a study of this nature, the cooperation of the school system, a number of trained personnel, and a large quantity of available time would be required. A wider use of the interview technique in assessing vocational and educational interests would, in most cases be worth this extra effort. Especially valuable would be additional projects, such as the analysis of tape recorded interview sessions and special interviews with the child's parents.

One of the most comprehensive structured interviews is described by Super (154:117-128). A series of "lead" questions is given the interviewer as are a number of "primers." For example, the "lead" of "Do you talk over your plans for the future with any of your folks?" is followed by the "primer" of "Do you think parents should help a boy choose his career?"

Super's research is being carried out with a male sample exclusively. The results of the present investigation suggest that it would be valuable to initiate a similar project using both boys and girls as subjects.

II. AREAS OF INVESTIGATION

Data from the current study suggest that a number of vital fields have been overlooked in most studies of vocational development. The influence of mass media and part-time employment have already been mentioned as areas where further study is needed. Research projects should also explore the process of occupational stereotyping, the influence of occupational guidance upon job preference, and the relationship between vocational-educational interests and academic achievement.

Occupational stereotyping. The present data indicate that junior high school students are attracted to occupations for both extrinsic and intrinsic reasons. Such extrinsic factors as prestige and status probably operate in the frequent selection of careers in medicine, law, business, and engineering. Other extrinsic factors ("glamor" and adventure) might characterize the keen interest at this age in aviation, modeling, and professional sports. Science, mechanics, and science are seen by the author to be areas in which the appeal is more often that of an intrinsic nature—an interest in the work itself.

About the same percentage of high-scoring and low-scoring students prefer careers in medicine and engineering when IEP and PMA performance is scrutinized. On the other hand, significantly more high-scoring boys and girls prefer science and teaching careers.

A logical outgrowth of this discovery would be an investigation of the way certain traits are assigned to members of different professions. Also important is an assessment of the process by which students rank occupations on a status scale. From what sources do their perceptions form and how do these percepts crystalize into stereotypes?

A useful tool in such studies would be a battery of projective techniques, perhaps including the recently published Geist Picture Interest Inventory (444). This technique investigates a child's self-concept in relation to his interests. Longitudinal studies on the order of "Project Talent" (254) would indicate how stereotypes are modified and how they affect final vocational choice.

The influence of the father's job upon a student's stereotype of that job has not been adequately examined. Nor has the length of time a particular vocation has been "in the family." Whether the father works in a "bureaucratic" framework or is a self-employed "entrepreneur" might be another key variable.

The effect of socio-economic class on stereotyping could be more thoroughly investigated. For example, girls in the Skokie sample present a test score difference in regard to their preference for teaching. In the lower social and economic classes, entry into the teaching profession, according to Riesman (105) and others, is looked upon as a major step up the social ladder. An investigation of a sample drawn from these classes might uncover no ability difference between girls preferring careers in education and those drawn toward other areas of work.

The recent theoretical emphasis upon vocational preference as the implementation of one's self-concept is probably associated with occupational stereotyping. The possibilities for experimentation in these vital fields remain virtually untapped. Darley and Hagenah (23:5-6) summarize the place occupational stereotypes play in the American culture.

> In a relatively mobile society such as ours, job titles and the hierarchical arrangement of jobs by perceived prestige and status levels represent the American equivalent of aristocracy. . . . The occupational label that an individual ultimately bears may be the hallmark of his status in the eyes of the community. The role of the administrator, the doctor, the lawyer, or the engineer may be acted differently by different individuals, but their status in society is to a marked extent defined by their membership in the groups called administrators, doctors, lawyers, or engineers.

Vocational guidance as a variable. Comparing the results from the present investigation with studies done previously presents a variety of problems. The comparisons cannot be adequately described unless such difference as age, environmental background, and mental ability are pointed out. There is another and more subtle agent that is rarely mentioned when reports of vocational interests are made--that of vocational guidance programs in the school.

Half the schools in America now have counseling and guidance programs (353). Many of these exist on a token basis with nothing but a librarian who supervises distribution of a small collection of occupational literature or an English teacher who provides college bulletins upon request. Other schools have full-time counselors, vocational guidance activities, or occupations courses.

A number of studies indicate that these programs and activities are a positive factor in extending the student's awareness of his own capabilities and the opportunities in the world of work (336; 501:6).

The Skokie sample did not engage in vocational activities or occupations courses. It would be of interest to repeat this survey with a similar group which had the benefit of some career exploration in school. As the guidance movement spreads to more school systems, it may turn out to be among the most significant variables in the process of occupational development.

Academic achievement and vocational interests. The academic achievement test utilized in the current investigation produced more significant differences between its high and low groups than did the mental ability test. This suggests that many of the studies which claim to discover no relationship between vocational interests and intelligence should be repeated with the use of an academic achievement test. The latter may prove to be a more valid measure of academic ability when this is the quantity an investigator seeks to examine.

Conclusion. Anyone familiar with occupational research can feel nothing but frustration after concluding a study of his own. In regard to the current investigation, the author realizes that only a few of the many variables have been scrutinized and even these were studied in connection with merely 351 girls and boys in two grades of one school.

The time is probably approaching when this type of study will be of value only for the implications it may carry for further research. The area of vocational development is so complex that it is best examined with a large and representative sample in a longitudinal study including a dozen or more variables.

Nevertheless, the present investigation was of great benefit to the author and may be of some value to others. It demonstrates, in each response and on every table of data, the enormous variability of young people and the hurdles they face as they attempt to plan for the future and select their vocational roles.

APPENDIX A

Tabulation of Data

NOTE:

In tabulating results for occupational choices, the Roe occupational classification was used. Roe (107) classifies all occupations according to "group" (*i.e.*, Business Contact) and "level" (Level 1 involves the greatest amount of training, education, and responsibility; Level 6 demands the least).

Although Roe lists several examples for each occupational group, she does not classify "housewife." In these tables, "housewife" has been placed under Group I (Service), Level 4, because a housewife's duties are similar to those of other occupations in this group and at this level.

Many more responses were made for "real estate salesman" than for other types of salesmen. Therefore, "real estate salesman" has been tabulated separately under Group II (Business Contact).

Whenever possible, the original wording of the pupil's response has been used. However, arbitrary designations were sometimes necessary. If nothing more than "businessman" was written, it was categorized under Group III (Organization), Level 2 ("average business executive").

If a scientist is a research worker, Roe classifies him in Group VI (Science). If he is an applied scientific worker, he is placed in Group IV (Technology). Such a division is too sophisticated to emerge from the one- or two-word responses of seventh- and eighth-graders. Therefore, to be certain that the final tabulation represented both groups, "biologist," "chemist," and "physicist" were placed under Group IV. "Astronomer" and "scientist" were placed in Group VI.

Sometimes, one occupational entry was found for several responses. The entry of "aviator" also covers such responses as "air force pilot," "jet pilot," "pilot," and "space astronaut."

Despite the difficulties of finding appropriate categories for a few occupations, it is felt that use of the Roe system proved valuable and useful. The fact that many statistically significant relationships and differences appeared further indicates that the Roe system can be used to classify occupational choices at this age level with a fair degree of accuracy.

NOTE:

As it was near the end of the school year, all seventh grade pupils were assumed to have a present chronological age of 13 and eighth grade pupils of 14.

The following responses were translated into the pupil's present assumed age:

"A short time ago,"
"Just the other day,"
"Recently,"
"This year," etc.

All responses in terms of grades (i.e., "fifth grade") were translated into ages.

All responses in terms of years (i.e., "four years ago") were translated into ages.

The response "A long time ago" includes:

"Ever since I can remember,"
"When I was little,"
"When I was very young," etc.

The response "I haven't" includes:

"I haven't decided yet,"
"Sometime in the future,"
"When I am older," etc.

Responses which did not cite a specific time (other than the above examples) were classified as "incorrect":

"When I first played sports,"
"When I first worked with a retarded child,"
"When I made up my mind,"
"When I read a pamphlet,"
"When I talked with my father," etc.

TABLE I

TABULATION OF DATA FOR QUESTION I, "IF YOU ARE NOT IN HIGH SCHOOL NOW, DO YOU PLAN TO GO TO HIGH SCHOOL?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
YES	93	96.87	111	96.52	65	96.48	69	93.24	158	97.53	180	95.23	204	96.68	134	95.71	338	96.29
NO	2	2.09	3	2.61	0	0	3	4.05	2	1.23	6	3.17	5	2.37	3	2.14	8	2.28
NO RESPONSE	1	1.04	1	.87	1	1.51	2	2.70	2	1.23	3	1.59	2	.95	3	2.14	5	1.52
TOTAL RESPONSES	96	100.00	115	100.01	66	99.99	74	99.99	162	9.99	189	99.99	211	100.00	140	99.99	351	99.99

TABLE 11

TABULATION OF DATA FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL RESPONSES	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
GROUP I: SERVICE																		
LEVEL 1 (NONE)																		
LEVEL 2																		
SOCIAL WORKER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SPEECH THERAPIST	1	1.04	0	0	1	1.5L	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
LEVEL 3																		
ARMY OFFICER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DETECTIVE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4																		
AIR STEWARDESS	8	8.33	0	0	3	4.54	0	0	11	6.79	0	00	8	3.79	33	2.L4	11	3.13
BEAUTICIAN	2	2.08	0	0	1	1.51	0	0	3	1.85	0	0	2	.95	1	.71	3	.85
HOUSEWIFE	4	4.17	0	0	1	1.5L	0	0	5	3.09	0	0	4	1.90	1	.71	5	1.42
POLICEMAN	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
SAILOR	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
SOLDIER; W.A.C.	1	1.04	1	.87	0	0	0	0	1	.62	L	.53	2	.95	0	0	2	.57
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP II: BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
REAL ESTATE SALESMAN	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
SALESMAN	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
LEVEL 4																		
RECEPTIONIST	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE 11 (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		9TH GRADE GIRLS		9TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		9TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP III: ORGANIZATION																		
LEVEL 1 (NONE)																		
LEVEL 2																		
BUSINESS EXECUTIVE	0	0	3	2.61	0	0	5	6.76	0	0	8	4.23	3	1.42	5	3.57	8	2.28
C.P.A.	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
PUBLIC SPEAKER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 3																		
ACCOUNTANT	1	1.04	1	.87	0	0	1	1.35	1	.62	2	1.06	2	.95	1	.71	3	.85
LEVEL 4																		
BOOKKEEPER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SECRETARY	11	11.46	0	0	8	12.12	0	0	19	11.73	0	0	11	5.21	8	5.71	19	5.41
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP IV: TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2																		
BIOLOGIST	0	1.04	2	1.74	1	0	0	0	1	.62	2	1.06	2	1.42	1	0	3	.85
CHEMIST	1	0	2	1.74	0	1.51	0	0	1	.62	2	1.06	3	.95	0	.71	3	.85
ENGINEER	0	0	13	11.30	0	0	9	12.16	0	0	22	11.64	13	6.16	9	6.43	22	6.27
PHYSICIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 3																		
AVIATOR	0	0	9	7.83	0	0	2	2.70	0	0	11	5.82	9	4.26	2	1.43	11	3.13
ELECTRONICS WORKER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 4																		
CARPENTER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ELECTRICIAN	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
MECHANIC	0	0	3	2.61	0	0	1	1.35	0	0	4	2.12	3	1.42	1	.71	4	1.14
PRINTER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 5																		
HOUSEPAINTER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 6																		
HOUSECLEANER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28

TABLE 11 (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP V: OUTDOOR																		
LEVEL 1 (NONE)																		
LEVEL 2																		
GARDENER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 3																		
FARM OWNER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
FOREST RANGER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
ASTRONOMER	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
DOCTOR	4	4.17	14	12.17	1	1.51	7	9.46	5	3.09	21	11.11	18	8.53	8	5.71	26	7.41
LEVEL 2																		
DENTIST	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
NURSE	9	9.37	0	0	7	10.61	0	0	16	9.88	0	0	9	4.26	7	5.00	16	4.56
PHARMACIST	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
SCIENTIST	0	0	11	9.56	1	1.51	4	5.40	1	.62	15	7.94	11	5.21	5	3.57	16	4.56
VETERINARIAN	0	0	1	.87	1	1.51	3	4.05	1	.62	4	2.12	1	.47	4	2.86	5	1.42
LEVEL 3																		
LAB. TECHNICIAN	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE 11 (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VII: GENERAL CULTURAL																		
LEVEL 1 (NONE)																		
LEVEL 2																		
LAWYER	0	0	8	6.96	0	0	6	8.11	0	0	14	7.41	8	3.79	6	4.29	14	3.99
SCHOOL TEACHER	28	29.17	0	0	19	28.79	1	1.35	47	29.00	1	.53	28	13.27	20	14.29	48	13.68
LEVEL 3																		
JOURNALIST	1	1.04	1	.87	1	1.51	1	1.35	2	1.23	2	1.05	2	.95	2	1.43	4	1.14
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE 11 (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
LEVEL 1																		
ACTOR, ACTRESS	0	0	1	.87	2	3.03	0	0	2	1.23	1	.53	1	.47	2	1.43	3	.85
AUTHOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CREATIVE ARTIST	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DANCER	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
INSTRUMENTAL MUSICIAN	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
SINGER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 2																		
CLOTHES DESIGNER	3	3.12	0	0	2	3.03	0	0	5	3.09	0	0	3	1.42	2	1.43	5	1.42
NIGHTCLUB ENTERTAINER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
PROFESSIONAL ATHLETE	0	0	9	7.83	0	0	6	8.11	0	0	15	7.94	9	4.26	6	4.29	15	4.27
WRITER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 3																		
INTERIOR DECORATOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 4																		
COMMERCIAL ARTIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
MODEL	6	6.25	0	0	3	4.54	0	0	9	5.56	0	0	6	2.84	3	2.14	9	2.56
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
DON'T KNOW	8	8.33	10	8.70	6	9.09	14	18.92	14	8.64	24	12.70	18	8.53	20	14.28	38	10.83
INCORRECT RESPONSE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NO RESPONSE	2	2.08	3	2.61	2	3.03	1	1.35	4	2.47	4	2.12	5	2.37	3	2.14	8	2.28
TOTAL RESPONSES	96	99.97	115	100.02	66	99.91	74	99.97	162	100.03	189	100.06	211	99.90	140	99.90	351	99.86

TABLE III

SUMMARIZED TABULATION OF DATA FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL, GROUP I: SERVICE	17	17.70	7	6.09	6	9.09	0	0	23	14.20	7	3.70	24	11.37	6	4.28	30	8.54
TOTAL, GROUP II: BUSINESS CONTACT	1	1.04	4	3.48	0	0	0	0	1	.62	4	2.12	5	2.37	0	0	5	1.42
TOTAL, GROUP III: ORGANIZATION	13	13.54	5	4.35	8	12.12	7	9.46	21	12.97	12	6.35	18	8.54	15	10.71	33	9.40
TOTAL, GROUP IV: TECHNOLOGY	1	1.04	33	28.70	1	1.51	17	22.98	2	1.23	50	26.45	34	16.11	18	12.85	52	14.80
TOTAL, GROUP V: OUTDOOR	0	0	1	.87	0	0	4	5.40	0	0	5	2.65	1	.47	4	2.86	5	1.42
TOTAL, GROUP VI: SCIENCE	13	13.54	30	26.08	11	16.66	16	21.62	24	14.82	46	24.34	43	20.38	27	19.28	70	19.94
TOTAL, GROUP VII: GENERAL CULTURAL	29	30.20	9	7.83	20	30.30	8	10.81	49	30.24	17	9.00	38	18.01	28	20.00	66	18.80
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	11	11.45	13	11.31	12	18.16	7	9.46	23	14.20	20	10.59	24	11.38	19	13.57	43	12.25
TOTAL, LEVEL 1	5	5.21	19	16.52	6	9.08	8	10.81	11	6.79	27	14.29	24	11.38	14	10.00	38	10.83
TOTAL, LEVEL 2	45	46.85	55	48.09	33	49.98	37	50.00	78	48.14	90	47.62	98	46.44	70	50.00	168	47.85
TOTAL, LEVEL 3	2	2.08	18	15.65	3	4.53	9	12.15	5	3.09	23	12.18	20	9.48	12	8.56	32	9.12
TOTAL, LEVEL 4	33	34.37	11	9.57	16	24.23	4	5.40	49	30.26	19	10.05	44	20.86	20	14.28	64	18.21
TOTAL, LEVEL 5	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
TOTAL, LEVEL 6	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DON'T KNOW	8	8.33	10	8.70	6	9.09	14	18.92	14	8.64	24	12.70	18	8.53	20	14.28	38	10.83
INCORRECT RESPONSE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NO RESPONSE	2	2.08	3	2.61	2	3.03	1	1.35	4	2.47	4	2.12	5	2.37	3	2.14	8	2.28
TOTAL RESPONSES	96	99.96	115	100.02	66	99.94	74	99.98	162	100.01	189	100.02	211	100.02	140	99.97	351	99.96

TABLE IV

TABULATION OF DATA FOR QUESTION No. ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?") "WHY?"

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
I ENJOY IT; I LIKE IT*	13	13.53	22	19.13	29	43.93	21	28.37	42	25.93	43	22.77	35	16.55	50	35.71	85	24.17
I HAVE TALENT; I'M GOOD AT IT	1	1.04	1	.87	3	4.54	4	5.40	4	2.47	5	2.64	2	.95	7	5.00	9	2.56
I WANT PRAISE	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
I WANT TO BE FAMOUS	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
IT'S A GOOD JOB	2	2.08	1	.87	1	1.51	2	2.70	3	1.85	3	1.58	3	1.42	3	2.14	6	1.71
IT'S A GOOD THING TO KNOW	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
IT'S IMPORTANT	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
IT'S INTERESTING	5	5.21	2	1.74	8	12.12	2	2.70	13	8.02	4	2.12	7	3.32	10	7.14	17	4.84
MY FATHER IS ONE	0	0	1	.87	0	0	5	6.76	0	0	6	3.17	1	.47	5	3.57	6	1.71
NO SPECIAL REASON	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
OPPORTUNITY TO SEE THE WORLD	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PAY IS GOOD	2	2.08	3	2.61	1	1.51	5	6.76	3	1.85	8	4.23	5	2.40	6	4.29	11	3.13
SHORTAGE OF THEM	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
TO BE HAPPY	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
TO HELP HUMANITY	3	3.12	0	0	4	6.06	1	1.35	7	4.32	1	.53	3	1.42	5	3.57	8	2.28
TO HELP THE COUNTRY	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DON'T KNOW	1	1.04	2	1.74	0	0	1	1.35	1	.62	3	1.59	3	1.42	1	.71	4	1.14
INCORRECT RESPONSE	2	2.08	1	.87	1	1.51	2	2.70	3	1.85	3	1.59	3	1.42	3	2.14	6	1.71
NO RESPONSE	64	66.67	80	69.56	11	16.67	30	40.54	75	46.30	110	58.20	144	68.25	41	29.29	185	52.71
TOTAL RESPONSES	96	99.97	115	100.00	66	99.91	74	99.90	162	100.00	189	100.02	211	99.97	140	99.93	351	99.93

*INCLUDES "I LIKE ANIMALS," "I LIKE CHILDREN," "I LIKE TO TRAVEL," "I LIKE TO WORK WITH PEOPLE," "I LIKE TO WRITE," ETC.

TABLE V

TABULATION OF DATA FOR QUESTION 3, "WHEN DID YOU DECIDE ON THE KIND OF WORK YOU WANT TO DO?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
14 YEARS OLD	0	0	0	0	8	12.12	8	10.81	8	4.94	8	4.23	0	0	16	11.43	16	4.56
13	9	9.37	15	13.04	11	16.67	11	14.86	20	12.35	26	13.76	24	11.37	22	15.71	46	13.10
12	13	13.54	19	16.52	11	16.67	7	9.46	24	14.81	26	13.76	32	15.17	18	12.86	50	14.24
11	18	18.75	12	10.43	2	3.03	7	9.46	20	12.35	19	10.05	30	14.22	9	6.43	39	11.11
10	6	6.25	16	13.91	6	9.09	2	2.70	12	7.41	18	9.52	22	10.43	8	5.71	30	8.55
9	1	1.04	1	.87	1	1.51	0	0	2	1.23	1	.53	2	.95	1	.71	3	.85
8	3	3.12	3	2.61	2	3.03	1	1.35	5	3.09	4	2.12	6	2.84	3	2.14	9	2.56
7	2	2.08	2	1.74	2	3.03	1	1.35	4	2.47	3	1.59	4	1.90	3	2.14	7	1.99
6	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
A LONG TIME AGO	5	5.21	4	3.48	3	4.54	0	0	8	4.94	4	2.12	9	4.26	3	2.14	12	3.42
I HAVEN'T	4	4.17	10	8.70	1	1.51	10	13.51	5	3.09	20	10.58	14	6.63	11	7.86	25	7.12
DON'T KNOW	6	6.25	5	4.35	3	4.54	8	10.81	9	5.56	13	6.88	11	5.21	11	7.86	22	6.27
INCORRECT RESPONSE	7	7.29	5	4.35	2	3.03	3	4.05	9	5.56	8	4.23	12	5.69	5	3.57	17	4.84
NO RESPONSE	22	22.92	23	20.00	13	19.70	16	21.62	35	21.60	39	20.63	45	21.33	29	20.71	74	21.08
TOTAL RESPONSES	96	99.99	115	100.00	66	99.98	74	99.98	162	100.02	189	100.00	211	100.00	140	99.98	351	99.97

TABLE VI

TABULATION OF DATA FOR QUESTION 2c, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE YOUR SECOND CHOICE?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I:																		
SERVICE																		
LEVEL 1 (NONE)																		
LEVEL 2																		
OCCUPATIONAL THERAPIST	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SOCIAL WORKER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 3 (NONE)																		
LEVEL 4																		
AIR STEWARDESS	3	3.12	0	0	2	3.03	0	0	5	3.09	0	0	3	1.42	2	1.43	5	1.42
BEAUTICIAN	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
HOUSEWIFE	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
POLICEMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SOLDIER; W.A.C.	1	1.04	1	.87	0	0	1	1.35	1	.62	2	1.06	2	.95	1	.71	3	.85
U.N. GUIDE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 5																		
WAITRESS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 6 (NONE)																		
GROUP II:																		
BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
REAL ESTATE [illegible]	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SALESMAN	0	0	1	.87	2	3.03	1	1.35	2	1.23	2	1.06	1	.47	3	2.14	4	1.14
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE VI (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP III: ORGANIZATION																		
LEVEL 1 (NONE)																		
LEVEL 2																		
BUSINESS EXEC.	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 3																		
GOV'T. WORKER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
OWNER OF A DRUG STORE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
RESTAURANT OWNER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STORE OWNER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
SECRETARY	3	3.12	0	0	6	9.09	0	0	9	5.36	0	0	3	1.42	6	4.29	9	2.56
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE VI (CONTINUED)

	7TH GRADE		7TH GRADE		8TH GRADE		8TH GRADE		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL	
	GIRLS		BOYS		GIRLS		BOYS										SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP IV:																		
TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2																		
ENGINEER	0	0	3	2.61	0	0	5	6.76	0	0	8	4.23	3	1.42	5	3.57	8	2.28
MATHEMATICIAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 3																		
AVIATOR	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
DRAFTSMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
RADIO OPERATOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
ELECTRICIAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 5																		
BRICK LAYER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SKILLED LABOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 6 (NONE)																		
GROUP V: OUTDOOR																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
FOREST RANGER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
DOCTOR	1	1.04	2	1.74	0	0	5	6.76	1	.62	7	3.70	3	1.42	5	3.57	8	2.28
LEVEL 2																		
DENTIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
NURSE	3	3.12	0	0	5	7.58	0	0	8	4.94	0	0	3	1.42	5	3.57	8	2.28
SCIENTIST	0	0	5	4.35	0	0	2	2.70	0	0	7	3.70	5	2.37	2	1.43	7	1.99
VETERINARIAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 3																		
DENTAL TECHNICIAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4 (NONE)																		
LEVELS 5, 6 (NONE)																		

TABLE VI (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VII: GENERAL CULTURAL																		
LEVEL 1 (NONE)																		
LEVEL 2																		
LAWYER	0	0	0	0	0	0	4	5.40	0	0	4	2.12	0	0	4	2.86	4	1.14
P.E. TEACHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SCHOOL TEACHER	1	1.04	0	0	5	7.58	2	2.70	6	3.70	2	1.06	1	.47	7	5.00	8	2.28
LEVEL 3																		
JOURNALIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VIII: ARTS & ENTERTAINMENT																		
LEVEL 1																		
ACTOR/ACTRESS	1	1.04	0	0	2	3.03	2	2.70	3	1.85	2	1.06	1	.47	4	2.86	5	1.42
ARCHITECT	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
ARTIST	1	1.04	1	.87	0	0	1	1.35	1	.62	2	1.06	2	.95	1	.71	3	.85
AUTHOR	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
SINGER	1	1.04	0	0	2	3.03	1	1.35	3	1.85	1	.53	1	.45	3	2.14	4	1.14
LEVEL 2																		
CLOTHES DESIGNER	0	0	0	0	3	4.54	0	0	3	1.85	0	0	0	0	3	2.14	3	.85
PROFESSIONAL ATHLETE	1	1.04	4	3.48	1	1.51	4	5.40	2	1.23	8	4.23	5	2.37	5	3.57	10	2.85
LEVEL 3																		
CARTOONIST	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
INTERIOR DECORATOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SPORTS ANNOUNCER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
MODEL	3	3.12	0	0	6	9.09	0	0	9	5.56	0	0	3	1.42	6	4.29	9	2.56
PHOTOGRAPHER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
DON'T KNOW	5	5.21	6	5.22	4	6.06	5	6.76	9	5.56	11	5.82	11	5.21	9	6.43	20	5.70
INCORRECT RESPONSE	2	2.08	3	2.61	1	1.51	2	2.70	3	1.85	5	2.64	5	2.37	3	2.14	8	2.28
NO RESPONSE	68	70.83	79	68.70	20	30.30	18	24.32	88	54.32	97	51.32	147	69.67	38	27.14	185	52.71
TOTAL RESPONSES	96	99.99	115	100.02	66	99.96	74	99.95	162	100.02	189	100.01	211	100.02	140	100.00	351	99.95

TABLE VII

SUMMARY OF DATA FOR QUESTION 2c, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE YOUR SECOND CHOICE?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL, GROUP I: SERVICE	4	4.17	1	.87	9	13.64	2	2.70	13	8.02	3	1.59	5	2.37	11	7.86	16	4.56
TOTAL, GROUP II: BUSINESS CONTACT	0	0	2	1.74	2	3.03	1	1.35	2	1.23	3	1.59	2	.95	3	2.14	5	1.42
TOTAL, GROUP III: ORGANIZATION	3	3.12	2	1.74	6	9.09	4	5.40	9	5.56	6	3.17	5	2.37	10	7.14	15	4.27
TOTAL, GROUP IV: TECHNOLOGY	0	0	7	6.09	0	0	11	14.86	0	0	18	9.52	7	3.32	11	7.86	18	5.13
TOTAL, GROUP V: OUTDOOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
TOTAL, GROUP VI: SCIENCE	5	5.21	8	6.96	5	7.58	8	10.81	10	6.17	16	8.47	13	6.16	13	9.29	26	7.41
TOTAL, GROUP VII: GENERAL CULTURE	1	1.04	1	.87	5	7.58	7	9.46	6	3.70	8	4.23	2	.95	12	8.57	14	3.99
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	8	8.33	6	5.22	14	21.21	15	20.27	22	13.58	21	11.11	14	6.63	29	20.71	43	12.25
TOTAL, LEVEL 1	4	4.17	4	3.48	4	6.06	12	16.22	8	4.94	16	8.46	8	3.79	16	11.43	24	6.84
TOTAL, LEVEL 2	7	6.25	15	13.04	16	24.24	19	25.68	22	13.57	34	17.99	21	10.05	35	24.99	56	15.94
TOTAL, LEVEL 3	1	1.04	6	5.22	2	3.03	12	16.22	3	1.85	18	9.52	7	3.32	14	10.00	21	5.98
TOTAL, LEVEL 4	10	10.42	2	1.74	18	27.27	4	5.40	28	17.27	6	3.18	12	5.69	22	15.72	34	9.67
TOTAL, LEVEL 5	0	0	0	0	1	1.51	2	2.70	1	.62	2	1.06	0	0	3	2.14	3	.85
TOTAL, LEVEL 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DON'T KNOW	5	5.21	6	5.22	4	6.06	5	6.76	9	5.56	11	5.82	11	5.21	9	6.43	20	5.70
INCORRECT RESPONSE	2	2.08	3	2.61	1	1.51	2	2.70	3	1.85	5	2.64	5	2.37	3	2.14	8	2.28
NO RESPONSE	68	70.83	70	60.87	20	30.30	18	24.32	88	54.32	97	51.32	147	69.67	38	27.14	185	52.71
TOTAL RESPONSES	96	100.00	115	100.01	66	99.97	74	100.00	162	99.98	189	99.99	211	100.00	140	99.99	351	99.95

TABLE VIII

TABULATION OF DATA FOR QUESTION 2b, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE...YOUR THIRD CHOICE?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
LEVEL 1 (NONE)																		
LEVEL 2																		
SOCIAL WORKER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 3																		
ARMY OFFICER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
AIR STEWARDESS	2	2.08	0	0	1	1.51	0	0	3	1.85	0	0	2	.95	1	.71	3	.85
HOUSEWIFE	1	1.04	0	0	6	9.09	0	0	7	4.32	0	0	1	.47	6	4.29	7	1.99
POLICEMAN	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 5																		
FIREMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 6 (NONE)																		
GROUP II: BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP III: ORGANIZATION																		
LEVEL 1 (NONE)																		
LEVEL 2																		
BUSINESS EXECUTIVE	0	0	1	.87	0	0	4	5.40	0	0	5	2.64	1	.47	4	2.86	5	1.42
LEVEL 3																		
OWNER OF A RESTAURANT	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STORE OWNER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4																		
SECRETARY	5	5.21	0	0	8	12.21	0	0	13	8.02	0	0	5	2.37	8	5.71	13	3.70
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE VII. (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP IV: TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2																		
ENGINEER	0	0	4	3.40	0	0	3	4.05	0	0	7	3.70	4	1.90	3	2.14	7	1.99
LEVEL 3																		
AVIATOR	0	0	4	3.40	0	0	1	1.35	0	0	5	2.64	4	1.90	1	.71	5	1.42
RADIO OPERATOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
CARPENTER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 5																		
TRUCK DRIVER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 6 (NONE)																		
GROUP V: OUTDOOR																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4																		
FOREST RANGER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SKIN DIVER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 5																		
TRAPPER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
DOCTOR	1	1.04	0	0	1	1.51	1	1.35	2	1.23	1	.53	1	1.04	2	1.43	3	.85
LEVEL 2																		
NURSE	2	2.08	0	0	1	1.51	0	0	3	1.85	0	0	2	.95	1	.71	3	.85
SCIENTIST	1	1.04	0	0	0	0	7	9.46	1	.62	7	3.70	1	.47	7	5.00	8	2.28
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE VIII (CONTINUED)

	7TH GRADE		7TH GRADE		8TH GRADE		8TH GRADE		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	GIRLS		BOYS		GIRLS		BOYS											
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP VII:																		
GENERAL CULTURAL																		
LEVEL 1 (NONE)																		
LEVEL 2																		
LAWYER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
P.E. TEACHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SCHOOL TEACHER	4	4.17	0	0	5	7.58	0	0	9	5.56	0	0	4	1.90	5	3.57	9	2.56
LEVEL 3																		
CHILD CARE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
JOURNALIST	0	0	1	.87	1	1.51	1	1.35	1	.62	2	1.06	1	.47	2	1.43	3	.85
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE VIII (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
LEVEL 1																		
ACTRESS	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
ARCHITECT	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ARTIST	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
DANCER	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
MUSICIAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
PIANIST	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 2																		
CLOTHES DESIGNER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
PROFESSIONAL ATHLETE	0	0	4	3.48	0	0	3	4.05	0	0	7	3.70	4	1.90	3	2.14	7	1.99
LEVEL 3 (NONE)																		
LEVEL 4																		
ADVERTISING ARTIST	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MODEL	1	1.04	0	0	3	4.54	0	0	4	2.47	0	0	1	1.04	3	2.14	4	1.14
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
DON'T KNOW	3	3.12	4	3.48	2	3.03	3	4.05	5	3.09	7	3.70	7	3.32	5	3.57	12	3.42
INCORRECT RESPONSE	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
NO RESPONSE	73	76.04	94	81.74	31	46.97	34	45.95	104	64.20	127	67.72	167	79.14	65	46.43	232	66.10
TOTAL RESPONSES	96	99.98	115	100.01	66	100.04	74	99.96	162	100.01	189	99.99	211	100.07	140	99.91	351	100.16

TABLE IX

SUMMARY OF DATA FOR QUESTION 2b, "IF YOU WERE NOT ABLE TO FOLLOW YOUR FIRST CHOICE OF WORK, WHAT WOULD BE...YOUR THIRD CHOICE?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL, GROUP I: SERVICE	4	4.17	1	.87	7	10.61	3	4.05	11	6.79	4	2.12	5	2.37	10	7.14	15	4.26
TOTAL, GROUP II: BUSINESS CONTACT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL, GROUP III: ORGANIZATION	5	5.21	2	1.74	8	12.12	5	6.76	13	8.02	7	3.70	7	3.32	13	9.28	20	5.69
TOTAL, GROUP IV: TECHNOLOGY	0	0	9	7.83	0	0	6	8.11	0	0	15	7.93	9	4.26	6	4.29	15	4.26
TOTAL, GROUP V: OUTDOOR	0	0	0	0	0	0	3	4.05	0	0	3	1.59	0	0	3	2.14	3	.85
TOTAL, GROUP VI: SCIENCE	4	4.17	0	0	2	3.03	8	10.81	6	3.70	8	4.23	4	1.90	10	7.14	14	3.98
TOTAL, GROUP VII: GENERAL CULTURAL	4	4.17	1	.87	7	10.61	4	5.40	11	6.79	5	2.65	5	2.37	11	7.86	16	4.56
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	2	2.08	4	3.48	9	13.64	7	9.46	11	6.79	11	5.82	6	2.84	16	11.43	22	6.26
TOTAL, LEVEL 1	2	2.08	0	0	6	9.09	4	5.40	8	4.93	4	2.12	2	.95	10	7.14	12	3.41
TOTAL, LEVEL 2	8	8.33	9	7.83	7	10.61	20	27.02	15	9.27	29	15.33	17	8.06	27	19.28	44	12.52
TOTAL, LEVEL 3	0	0	6	5.22	2	3.03	5	6.76	2	1.23	11	6.88	6	2.84	7	5.00	13	3.70
TOTAL, LEVEL 4	9	9.37	2	1.74	18	27.27	4	5.40	27	16.66	6	2.65	11	5.21	22	15.72	33	9.39
TOTAL, LEVEL 5	0	0	0	0	0	0	3	4.05	0	0	3	1.06	0	0	3	2.14	3	.84
TOTAL, LEVEL 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DON'T KNOW	3	3.12	4	3.48	2	3.03	3	4.05	5	3.09	7	3.70	7	3.32	5	3.57	12	3.42
INCORRECT RESPONSE	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
NO RESPONSE	73	76.04	94	81.74	31	46.97	34	45.95	104	64.20	128	67.72	167	79.14	65	46.43	232	66.10
TOTAL RESPONSES	96	99.90	115	100.01	66	100.00	74	99.98	162	100.00	189	99.99	211	99.98	140	99.99	351	99.95

TABLE X

TABULATION OF DATA FOR QUESTION 4a, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP I: SERVICE																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
CATCHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
AIR STEWARDESS	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
BEAUTICIAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
HOUSEWIFE	3	3.12	0	0	0	0	0	0	3	1.85	0	0	3	1.42	0	0	3	.85
SOLDIER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
W.A.V.E.	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP III: BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
REAL ESTATE	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
SALESMAN	0	0	5	4.35	0	0	4	5.40	0	0	9	4.76	5	2.37	4	2.86	9	2.56
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE X (CONTINUED)

	7TH GRADE		7TH GRADE		8TH GRADE		8TH GRADE		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL	
	GIRLS		BOYS		GIRLS		BOYS										SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP III: ORGANIZATION																		
LEVEL 1 (NONE)																		
LEVEL 2																		
ADVERTISING EXEC.	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
BUSINESS EXEC.	0	0	3	2.61	0	0	4	5.40	0	0	7	3.70	3	1.42	4	2.84	7	1.96
MANUFACTURER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STOCKBROKER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 3																		
ACCOUNTANT	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
OWNER OF STORE	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
OWNER OF RESTAURANT	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
SECRETARY	1	1.04	0	0	4	6.06	0	0	5	3.01	0	0	1	.47	4	2.84	5	1.42
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP IV: TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2																		
ENGINEER	0	0	2	1.74	0	0	4	5.40	0	0	6	3.17	2	.95	4	2.84	6	1.71
MATHEMATICIAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PHYSICIST	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 3																		
AVIATOR; PILOT	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
LEVEL 4																		
PRINTER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
LEVEL 5																		
BAKER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 6 (NONE)																		

TABLE X (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP V: OUTDOOR																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
DOCTOR	3	3.12	16	13.91	0	0	1	1.35	3	1.85	17	8.99	19	9.00	1	.71	20	5.70
SCIENTIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 2																		
DENTIST	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
NURSE	2	2.08	0	0	3	4.54	0	0	5	3.09	0	0	2	.95	3	2.14	5	1.42
PHARMACIST	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
VETERINARIAN	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
LEVEL 3 (NONE)																		
LEVEL 4																		
DENTAL ASSISTANT	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VII: GENERAL CULTURAL																		
LEVEL 1 (NONE)																		
LEVEL 2																		
LAWYER	0	0	5	4.35	0	0	2	2.70	0	0	7	3.70	5	2.37	2	1.43	7	1.99
TEACHER	6	6.25	3	0	6	9.09	0	0	12	7.41	0	0	6	2.84	6	4.29	12	3.42
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE X (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
LEVEL 1																		
ARTIST	1	1.04	0	0	1	1.50	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
MUSICIAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SINGER	0	0	0	0	1	1.50	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 2																		
COSTUME DESIGNER	1	1.04	0	0	1	1.50	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
PRO. ATHLETE	0	0	2	1.74	0	0	0	0	0	0	2	1.05	2	.95	0	0	2	.57
LEVEL 3 (NONE)																		
LEVEL 4																		
COMMERCIAL ARTIST	0	0	1	.87	0	0	1	1.35	0	0	2	1.05	1	.47	1	.71	2	.57
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
DON'T KNOW	14	14.58	20	17.39	12	18.18	16	21.62	26	16.05	36	19.05	34	16.11	28	20.00	62	17.66
FREE CHOICE	28	29.17	33	28.70	21	31.82	15	20.27	49	30.25	48	25.40	61	28.91	36	25.71	97	27.63
INCORRECT RESPONSE	10	10.42	3	2.61	6	9.09	2	2.70	16	9.88	5	2.64	13	6.16	8	5.71	21	5.98
NO RESPONSE	21	21.87	12	10.43	11	16.67	10	13.51	32	19.75	22	11.64	33	15.64	21	15.00	54	15.38
TOTAL RESPONSES	96	99.97	115	100.01	66	99.95	74	99.95	162	100.02	189	100.01	211	99.93	140	99.95	351	99.07

TABLE XI

SUMMARY OF DATA FOR QUESTION 4a, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
TOTAL, GROUP I: SERVICE	6	6.25	0	0	0	0	2	2.70	6	3.70	2	1.06	6	2.84	2	1.43	8	2.27
TOTAL, GROUP II: BUSINESS CONTACT	0	0	6	5.22	0	0	5	6.76	0	0	11	5.82	6	2.84	5	3.57	11	3.13
TOTAL, GROUP III: ORGANIZATION	1	1.04	7	6.09	4	6.06	9	12.16	5	3.09	16	8.46	8	3.79	13	9.29	21	5.98
TOTAL, GROUP IV: TECHNOLOGY	0	0	6	5.22	0	0	8	10.81	0	0	14	7.41	6	2.84	8	5.71	14	3.99
TOTAL, GROUP V: OUTDOOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL, GROUP VI: SCIENCE	7	7.29	20	17.39	3	4.54	4	5.40	10	6.17	24	12.69	27	12.79	7	5.00	34	9.68
TOTAL, GROUP VII: GENERAL CULTURAL	6	6.25	5	4.35	6	9.09	2	2.70	12	7.41	7	3.70	11	5.21	8	5.71	19	5.41
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	3	3.12	3	2.61	3	4.54	1	1.35	6	3.70	4	2.12	6	2.84	4	2.85	10	2.85
TOTAL, LEVEL 1	5	5.20	16	13.91	2	3.03	1	1.35	7	4.32	17	8.99	21	9.95	3	2.14	24	6.84
TOTAL, LEVEL 2	10	10.41	17	14.79	10	15.14	15	20.27	20	12.34	32	16.92	27	12.79	25	17.85	52	14.81
TOTAL, LEVEL 3	0	0	12	10.44	0	0	11	14.86	0	0	23	12.17	12	5.69	11	7.85	23	6.54
TOTAL, LEVEL 4	8	8.33	1	.87	4	6.06	4	5.40	12	7.41	5	2.65	9	4.25	8	5.71	17	4.83
TOTAL, LEVEL 5	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
TOTAL, LEVEL 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DON'T KNOW	14	14.58	20	17.39	12	18.18	16	21.62	26	16.05	36	19.05	34	16.11	28	20.00	62	17.66
INCORRECT RESPONSE	10	10.42	3	2.61	6	9.09	2	2.70	16	9.88	5	2.64	13	6.16	8	5.71	21	5.98
NO RESPONSE	21	21.87	12	10.43	11	16.67	10	13.51	32	19.75	22	11.64	33	15.64	21	15.00	54	15.38
FREE CHOICE	28	29.17	33	28.70	21	31.82	15	20.27	49	30.25	48	25.40	61	28.91	36	25.71	97	27.63
TOTAL RESPONSES	96	99.98	115	100.01	66	99.99	74	99.98	162	100.00	189	99.99	211	99.97	140	99.97	351	99.95

TABLE XII

TABULATION OF DATA FOR QUESTION 4a, ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?") "WHY?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(CHILD-CENTERED RESPONSES)	(6)	(6.24)	(12)	(10.44)	(17)	(25.74)	(16)	(21.61)	(23)	(14.20)	(28)	(14.82)	(18)	(8.53)	(33)	(23.57)	(51)	(14.52)
BECAUSE																		
I CAN GET AHEAD...	0	0	3	2.61	1	1.51	2	2.70	1	.62	5	2.64	3	1.42	3	2.14	6	1.71
I HAVE THE ABILITY...	1	1.04	2	1.74	2	3.03	2	2.70	3	1.85	4	2.12	3	1.42	4	2.86	7	1.99
I WILL BE HAPPY...	1	1.04	1	.87	4	6.06	1	1.35	5	3.09	2	1.06	2	.95	5	3.57	7	1.99
I WILL LIKE IT...	2	2.08	1	.87	6	9.09	1	1.35	8	4.94	2	1.06	3	1.42	7	5.00	10	2.85
IT IS A GOOD JOB...	1	1.04	1	.87	3	4.54	3	4.05	4	2.47	4	2.12	2	.95	6	4.29	8	2.28
OF GOOD PAY...	1	1.04	4	3.48	1	1.51	7	9.46	2	1.23	11	5.82	5	2.37	8	5.71	13	3.70

TABLE XII (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
(FATHER-CENTERED RESPONSES)	(2)	(2.08)	(9)	(7.83)	(6)	(9.09)	(12)	(16.21)	(8)	(4.93)	(21)	(11.12)	(11)	(5.22)	(18)	(12.85)	(29)	(8.25)
BECAUSE:																		
HE IS ONE...	0	0	4	3.48	2	3.03	8	10.81	2	1.23	12	6.35	4	1.90	10	7.14	14	3.99
HE LIKES IT...	1	1.04	2	1.74	1	1.51	1	1.35	2	1.23	3	1.59	3	1.42	2	1.43	5	1.42
HE USED TO BE ONE...	1	1.04	1	.87	0	0	2	2.70	1	.62	3	1.59	2	.95	2	1.43	4	1.14
HE WANTED TO BE ONE.	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
HIS MOTHER WAS ONE..	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
MY MOTHER IS ONE...	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
(SOCIETY-CENTERED RESPONSES)	(1)	(1.04)	(2)	(1.74)	(3)	(4.54)	(1)	(1.35)	(4)	(2.47)	(3)	(1.59)	(3)	(1.42)	(4)	(2.86)	(7)	(1.99)
BECAUSE:																		
IT IS IMPORTANT...	0	0	1	.87	3	4.54	1	1.35	3	1.85	2	1.06	1	.47	4	2.86	5	1.42
IT WILL HELP MANKIND.	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
DON'T KNOW	9	9.37	15	13.04	12	18.18	16	21.62	21	12.96	31	16.40	24	11.37	28	20.00	52	14.81
FREE CHOICE	28	29.17	33	28.70	21	31.82	15	20.27	49	30.25	48	25.40	61	28.91	36	25.71	97	27.63
INCORRECT RESPONSE	7	7.29	8	6.96	4	6.06	6	8.11	11	6.79	14	7.41	15	7.11	10	7.14	25	7.12
NO RESPONSE...	43	44.79	36	31.30	3	4.54	8	10.81	46	28.39	44	23.28	79	37.44	11	7.86	90	25.64
TOTAL RESPONSES	96	99.98	115	100.01	66	99.96	74	99.98	162	99.99	189	100.02	211	100.00	140	99.99	351	99.96

TABLE XIII

TABULATION OF DATA FOR QUESTION 4c, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP I: SERVICE																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4																		
AIR STEWARDESS	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
BEAUTICIAN	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
HOUSEWIFE	5	5.21	0	0	1	1.51	0	0	6	3.70	0	0	5	2.37	1	.71	6	1.71
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP II: BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
[illegible]	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP III: ORGANIZATION																		
LEVEL 1 (NONE)																		
LEVEL 2																		
BUSINESS EXECUTIVE	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
LEVEL 3																		
OWNER OF STORE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4																		
BOOKKEEPER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SECRETARY	3	3.12	0	0	3	4.54	0	0	6	3.70	0	0	3	1.42	3	2.14	6	1.71
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE XIII (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP IV: TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2																		
ENGINEER	0	0	3	2.61	0	0	1	1.35	0	0	4	2.12	3	1.42	1	.71	4	1.14
LEVEL 3																		
AVIATOR; PILOT	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 4																		
PRINTER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP V: OUTDOOR																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
DOCTOR	2	2.08	17	14.78	1	1.51	6	8.11	3	1.85	23	12.17	19	9.00	7	5.00	26	7.41
LEVEL 2																		
DENTIST	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
NURSE	3	3.12	0	0	2	3.03	0	0	5	3.09	0	0	3	1.42	2	1.43	5	1.42
PHARMACIST	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
SCIENTIST	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
VETERINARIAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE XIII (CONTINUED)

RESPONSE	7th Grade Girls No.	7th Grade Girls %	7th Grade Boys No.	7th Grade Boys %	8th Grade Girls No.	8th Grade Girls %	8th Grade Boys No.	8th Grade Boys %	Girls No.	Girls %	Boys No.	Boys %	7th Grade No.	7th Grade %	8th Grade No.	8th Grade %	Total Subjects No.	Total Subjects %
GROUP VII: GENERAL CULTURAL																		
LEVEL 1 (NONE)																		
LEVEL 2																		
LAWYER	1	1.04	5	4.35	0	0	2	2.70	1	.62	7	3.70	6	2.84	2	1.43	8	2.28
TEACHER	8	8.33	2	1.74	8	12.12	1	1.35	16	9.88	3	1.59	10	4.74	9	6.43	19	5.41
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VIII: ARTS & ENTERTAINMENT																		
LEVEL 1																		
ACTRESS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
ARTIST	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
AUTHOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DANCER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 2																		
DESIGNER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 3 (NONE)																		
LEVEL 4																		
COMMERCIAL ARTIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
MODEL	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
DON'T KNOW	11	11.46	21	18.26	8	12.12	18	24.32	19	11.73	39	20.63	32	15.16	26	18.57	58	16.52
FREE CHOICE	26	27.08	23	20.00	17	25.76	13	17.57	43	26.54	36	19.05	49	23.22	30	21.43	79	22.51
INADEQUATE RESPONSE	10	10.42	8	6.96	7	10.61	5	6.76	17	10.49	13	6.88	18	8.53	12	8.57	30	8.55
NO RESPONSE	22	22.92	26	22.61	13	19.70	18	24.32	35	21.60	44	23.29	48	22.75	31	22.14	79	22.51
TOTAL RESPONSES	96	99.98	115	100.01	66	99.96	74	99.98	162	99.99	189	100.03	211	99.93	140	99.94	351	99.96

TABLE XIV

SUMMARY OF DATA FOR QUESTION 40, "WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL, GROUP I: SERVICE	8	8.33	0	0	2	3.03	0	0	10	6.17	0	0	8	3.79	2	1.43	10	2.85
TOTAL, GROUP II: BUSINESS CONTACT	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
TOTAL, GROUP III: ORGANIZATION	3	3.12	3	2.61	3	4.54	2	2.70	6	3.70	5	2.65	6	2.84	5	3.57	11	3.12
TOTAL, GROUP IV: TECHNOLOGY	0	0	4	3.48	0	0	4	5.40	0	0	8	4.24	4	1.89	4	2.85	8	2.28
TOTAL, GROUP V: OUTDOOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL, GROUP VI: SCIENCE	5	5.20	20	17.39	4	6.05	9	12.16	9	5.55	29	15.34	25	11.84	13	9.29	38	10.83
TOTAL, GROUP VII: GENERAL CULTURAL	9	9.37	7	6.09	8	12.12	3	4.05	17	10.49	10	5.29	16	7.58	11	7.86	27	7.69
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	2	2.08	2	1.74	4	6.05	1	1.35	6	3.70	3	1.59	4	1.90	5	3.56	9	2.55
TOTAL, LEVEL 1	3	3.12	18	15.65	3	4.54	7	9.46	6	3.70	25	13.23	21	9.95	10	7.14	31	8.83
TOTAL, LEVEL 2	12	12.49	14	12.18	12	18.17	9	12.15	24	14.81	23	12.17	26	12.31	21	15.00	47	13.39
TOTAL, LEVEL 3	0	0	3	2.61	0	0	2	2.70	0	0	5	2.65	3	1.41	2	1.42	5	1.42
TOTAL, LEVEL 4	12	12.49	2	1.74	6	9.08	2	2.70	18	11.10	4	2.12	14	6.64	8	5.71	22	6.26
TOTAL, LEVEL 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL, LEVEL 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DON'T KNOW	11	11.46	21	18.26	8	12.12	18	24.32	19	11.73	39	20.64	32	15.16	26	18.57	58	16.52
INCORRECT RESPONSE	10	10.42	8	6.96	7	10.61	5	6.76	17	10.49	13	6.88	18	8.53	12	8.57	30	8.55
NO RESPONSE	22	22.92	26	22.61	13	19.70	18	24.32	35	21.60	44	23.29	48	22.75	31	22.14	79	22.51
FREE CHOICE	26	27.08	23	20.00	17	25.76	13	17.57	43	26.54	36	19.05	49	23.22	30	21.43	79	22.51
TOTAL RESPONSES	96	99.98	115	100.01	66	99.98	74	99.98	162	99.97	189	100.02	211	99.97	140	99.98	351	99.98

TABLE XV

TABULATION OF DATA FOR QUESTION 4b, ("WHAT KIND OF WORK DOES YOUR MOTHER WANT YOU TO DO?") "WHY?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSES	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
(CHILD-CENTERED RESPONSES)	(9)	(9.31)	(9)	(7.83)	(20)	(30.30)	(14)	(18.90)	(29)	(17.90)	(23)	(12.17)	(18)	(8.53)	(34)	(24.28)	(52)	(14.80)
BECAUSE																		
I CAN GET AHEAD...	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
I CAN LEARN FROM IT.	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
I HAVE THE ABILITY..	1	1.04	1	.87	4	6.06	2	2.70	5	3.09	3	1.59	2	.95	6	4.29	8	2.28
I WILL BE HAPPY...	2	2.08	1	.87	6	9.09	2	2.70	8	4.94	3	1.59	3	1.42	8	5.71	11	3.13
I WILL LIKE IT...	3	3.12	2	1.74	5	7.58	2	2.70	8	4.94	4	2.12	5	2.37	7	5.00	12	3.42
IT IS A GOOD JOB...	2	2.08	2	1.74	4	6.06	3	4.05	6	3.70	5	2.64	4	1.90	7	5.00	11	3.13
OF GOOD PAY...	0	0	2	1.74	0	0	3	4.05	0	0	5	2.64	2	.95	3	2.14	5	1.42
(MOTHER-CENTERED RESPONSES)	(6)	(6.24)	(5)	(4.35)	(9)	(13.63)	(7)	(9.45)	(15)	(9.26)	(12)	(6.34)	(11)	(5.22)	(16)	(11.43)	(27)	(7.68)
BECAUSE																		
MY FATHER IS ONE...	0	0	2	1.74	0	0	4	5.40	0	0	6	3.17	2	.95	4	2.86	6	1.71
SHE LIKES IT...	2	2.08	2	1.74	2	3.03	3	4.05	4	2.47	5	2.64	4	1.90	5	3.57	9	2.56
SHE IS ONE...	1	1.04	1	.87	3	4.54	0	0	4	2.47	1	.53	2	.95	3	2.14	5	1.42
SHE WANTED TO BE ONE.	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
SHE WAS ONE...	2	2.08	0	0	2	3.03	0	0	4	2.47	0	0	2	.95	2	1.43	4	1.14

TABLE XV (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
(SOCIETY-CENTERED RESPONSES)	(1)	(1.04)	(2)	(1.74)	(2)	(3.03)	(2)	(2.70)	(3)	(1.85)	(4)	(2.12)	(3)	(1.42)	(4)	(2.86)	(7)	(1.99)
BECAUSE																		
IT IS IMPORTANT...	0	0	0	0	2	3.03	1	1.35	2	1.23	1	.53	0	0	3	2.14	3	.85
IT WILL HELP MANKIND.	1	1.04	1	.87	0	0	1	1.35	1	.62	2	1.06	2	.95	1	.71	3	.85
OUR COUNTRY NEEDS THEM	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DON'T KNOW	11	11.46	21	18.26	8	12.12	12	16.22	19	11.73	33	17.46	32	15.17	20	14.29	52	14.81
FREE CHOICE	26	27.08	23	20.00	17	24.76	13	17.57	43	26.54	36	19.05	49	23.22	30	21.43	79	22.51
INCORRECT RESPONSE	10	10.42	9	7.83	7	10.61	4	5.40	17	10.49	13	6.88	19	9.00	11	7.86	30	8.55
NO RESPONSE	33	34.37	46	40.00	3	4.54	22	29.73	36	22.22	68	35.98	79	37.44	25	17.86	104	29.63
TOTAL RESPONSES	96	99.92	115	100.01	66	99.99	74	99.97	162	99.99	189	100.00	211	100.00	140	100.02	351	99.96

TABLE XVI

TABULATION OF DATA FOR QUESTION 5a, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
LEVEL 1																		
PSYCHOLOGIST	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 2 (NONE)																		
LEVEL 3																		
ARMY OFFICER	0	0	3	2.61	0	0	1	1.35	0	0	4	2.12	3	1.42	1	.71	4	1.14
CATERER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
RAILROAD CONDUCTOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 4																		
BARBER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
BARTENDER	0	0	2	1.74	1	1.51	0	0	1	.62	2	1.06	2	.95	1	.71	3	.85
SAILORS	1	1.04	1	.87	1	1.51	1	1.35	2	1.23	2	1.06	2	.95	2	1.43	4	1.14
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP II: BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2																		
THEATRICAL AGENT	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 3																		
REAL ESTATE	1	1.04	3	2.61	1	1.51	2	2.70	2	1.23	5	2.64	4	1.90	3	2.14	7	1.99
RENTAL AGENT	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SALESMAN																		
(UNSPECIFIED)	14	14.58	23	20.00	9	13.64	8	10.81	23	14.20	31	16.40	37	17.53	17	12.14	54	15.30
CARS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
CLOTHES	4	4.17	0	0	0	0	1	1.35	4	2.47	1	.53	4	1.90	1	.71	5	1.42
FURS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
INSURANCE	3	3.12	1	.87	1	1.51	0	0	4	2.47	1	.53	4	1.90	1	.71	5	1.42
SEAT COVERS	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SHOES	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 4																		
COLLECTOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE XVI (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
GROUP III: ORGANIZATION																		
LEVEL 1																		
BUSINESS EXECUTIVE (TOP)																		
PRESIDENT, CHICAGO GASKET CO.	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PRES., FUR CO.	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PRES., OWN BUSINESS	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
PRES., MERIT CHEVROLET	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PRES., STEEL CO.	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
V.PRES., MOTOROLA	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
V.PRES., STEEL CO.	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
FINANCIER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 2																		
BUS.EXECUTIVE, (AVERAGE)	4	4.17	1	.87	0	0	1	1.35	4	2.47	2	1.06	5	2.37	1	.71	6	1.71
CPA ACCOUNTANT	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
EXPORT-IMPORT BUYER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PROPRIETOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STOCKBROKER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28

TABLE XVI (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP III: ORGANIZATION																		
LEVEL 3																		
ACCOUNTANT	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
ADVERTISER	1	1.04	2	1.74	1	1.54	0	0	2	1.23	2	1.06	3	1.42	1	.71	4	1.14
BUS. EXEC. (OWNER)	2	2.08	5	4.35	2	3.08	2	2.70	4	2.47	7	3.70	7	3.32	4	2.86	11	3.13
BUYER (UNSPECIFIED)	0	0	0	0	1	1.54	0	0	1	.62	0	0	0	0	1	.71	1	.28
CLOTHES	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SCRAP	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SHOES	0	0	1	.87	1	1.54	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
METAL	0	0	0	0	1	1.54	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
CURRENCY EXCHANGE [illegible]	0	0	0	0	1	1.54	0	0	1	.62	0	0	0	0	1	.71	1	.28
FACTORY FOREMAN	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
GOVT. WORKER	2	2.08	0	0	0	0	1	1.35	2	1.23	1	.53	2	.95	1	.71	3	.85
OWNER (UNSPECIFIED)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
BOWLING ALLEY	0	0	0	0	1	1.54	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
CLOTHES STORE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DEPT. STORE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
DRUG STORE	0	0	0	0	1	1.54	0	0	1	.62	0	0	0	0	1	.71	1	.28
EGG STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
FURNITURE STORE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GAS STATION	1	1.04	1	.87	1	1.54	1	1.35	2	1.23	2	1.06	2	.95	2	1.43	4	1.14
GROCERY	3	3.12	0	0	0	0	2	2.70	3	1.85	2	1.06	3	1.42	2	1.43	5	1.42
[illegible] GUN STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
JEWELRY STORE	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
LAUNDRY	0	0	0	0	1	1.54	0	0	1	.62	0	0	0	0	1	.71	1	.28
LIQUOR STORE	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
MEAT PACKING	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NEWSPAPER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PLASTIC COVER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
PRINTING COMPANY	0	0	0	0	2	3.08	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
RECORD STORE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
RESTAURANT	0	0	0	0	1	1.54	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
SHOE STORE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
TAVERN	0	0	0	0	1	1.54	0	0	1	.62	0	0	0	0	1	.71	1	.28
TOOL & DYE SHOP	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28

TABLE XVI (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
GROUP III:ORGANIZATION																		
LEVEL 3 (CONT.)																		
MANAGER(UNSPECIFIED)	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
BUSINESS MGR.	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GAS SERVICE	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
CONSTRUCTION	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
CREDIT MGR.	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
DEPT. MGR.	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
GROCERY STORE	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
HOTEL MGR.	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
OFFICE MGR.	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
PLANT MGR.	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PRODUCTION MGR.	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
RESTAURANT	0	0	3	2.61	1	1.51	1	1.35	1	.62	4	2.12	3	1.42	2	1.43	5	1.42
SALES MGR.	1	1.04	2	1.74	1	1.51	1	1.35	2	1.23	3	1.59	3	1.42	2	1.43	5	1.42
SHOE STORE	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
STOCK MGR.	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
TRAFFIC MGR.	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
TRUCK PARTS	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
MANUFACTURER	2	2.08	1	.87	1	1.51	1	1.35	3	1.85	2	1.06	3	1.42	2	1.43	5	1.42
MERCHANT	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PURCHASING AGENT	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
WHOLESALE DEALER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4																		
BOOKKEEPER	2	2.08	1	.87	1	1.51	1	1.35	3	1.85	2	1.06	3	1.42	2	1.43	5	1.42
CLERK	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SHIPPING CLERK	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE X[illegible] (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECT No.	TOTAL SUBJECT %
GROUP IV: TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2																		
BIOLOGIST	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
CHEMIST	1	1.04	2	1.74	0	0	0	0	1	.62	2	1.06	3	1.42	0	0	3	.85
ENGINEER	10	10.42	6	5.22	0	0	2	2.70	10	6.17	8	4.23	16	7.58	2	1.43	18	5.13
PHYSICIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 3																		
CONTRACTOR, BLDG.	0	0	2	1.74	1	1.51	1	1.35	1	.62	3	1.59	2	.95	2	1.43	4	1.14
CONT., CARPENTRY	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
CONT., FLOORING	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
CONT., PAINTING	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CONT., PLUMBING	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
DRAFTSMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ELECTRONICS WORKER	0	0	3	2.61	0	0	0	0	0	0	3	1.59	3	1.42	0	0	3	.85
FACTORY INSPECTOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
RADIO OPERATOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4																		
CARPENTER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
CARPET LAYER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
GLAZIER	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
ELECTRICIAN	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
TOOL MAKER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
MACHINIST	2	2.08	1	.87	0	0	0	0	2	1.23	1	.53	3	1.42	0	0	3	.85
MECHANIC	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
MOLD MAKER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PAINTER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
PHOTOENGRAVER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PLUMBER	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
PRINTER	0	0	0	0	0	0	3	4.05	0	0	3	1.59	0	0	3	2.14	3	.85
ASSEMBLER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 5																		
BAKER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
BUTCHER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
FACTORY WORKER	2	2.08	1	.87	1	1.51	0	0	3	1.85	1	.53	3	1.42	1	.71	4	1.14
PUNCH PRESS OPERATOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
TRUCK DRIVER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 6 (NONE)																		

TABLE XVI (CONTINUED)

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP V: OUTDOOR																		
LEVEL 1																		
LANDSCAPIST	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 2 (NONE)																		
LEVEL 3																		
FLORIST	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
DOCTOR	1	1.04	3	2.61	2	3.03	2	2.70	3	1.85	5	2.64	4	1.90	4	2.86	8	2.28
OPTOMETRIST	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
LEVEL 2																		
DENTIST	1	1.04	1	.87	1	1.51	1	1.35	2	1.23	2	1.06	2	.95	2	1.43	4	1.14
PHARMACIST	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
SCIENTIST	0	0	0	0	3	4.54	1	1.35	3	1.85	1	.53	0	0	4	2.86	4	1.14
LEVEL 3																		
DENTAL TECHNICIAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE XVI (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VII: GENERAL CULTURAL																		
LEVEL 1																		
PROFESSOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 2																		
LAWYER	2	2.08	1	.87	1	1.51	0	0	3	1.85	1	.53	3	1.42	1	.71	4	1.14
TEACHER	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	[illegible]	.57
LEVEL 3																		
JOURNALIST	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VIII: ARTS & ENTERTAINMENT																		
LEVEL 1																		
ARTIST	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
MUSICIAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 2																		
ARCHITECT	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 3																		
INTERIOR DECORATOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 4																		
COMMERCIAL ARTIST	3	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
PHOTOGRAPHER	1	1.04	1	.87	1	1.51	0	0	2	1.23	1	.53	2	.93	1	.71	3	.85
LEVEL 5 (NONE)																		
DON'T KNOW	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
INCORRECT RESPONSE	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
NO RESPONSE	4	4.17	2	1.74	1	1.51	4	5.40	5	3.09	6	3.17	6	2.84	5	3.57	11	3.13
TOTAL RESPONSES	96	99.91	115	100.04	66	99.77	74	99.91	162	100.03	189	100.09	211	99.77	140	99.72	351	99.52

TABLE XVII

SUMMARY OF DATA FOR QUESTION 5a, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL, GROUP I: SERVICE	2	2.08	7	6.09	3	4.54	4	5.40	5	3.09	11	5.81	9	4.27	7	5.00	16	4.55
TOTAL, GROUP II: BUSINESS CONTACT	22	22.92	29	25.22	14	21.21	13	17.56	36	22.22	42	22.22	51	24.17	27	19.28	79	22.21
TOTAL, GROUP III: ORGANIZATION	39	40.62	35	30.44	29	43.93	29	39.18	68	41.98	64	33.87	74	35.07	58	41.42	132	37.59
TOTAL, GROUP IV: TECHNOLOGY	20	20.83	27	23.48	7	10.60	14	18.91	27	16.67	41	21.69	47	22.27	21	15.00	68	19.36
TOTAL, GROUP V: OUTDOOR	1	1.04	0	0	1	1.51	0	0	2	1.24	0	0	1	.47	1	.71	2	.56
TOTAL, GROUP VI: SCIENCE	3	3.12	5	4.35	8	12.12	5	6.75	11	6.79	10	5.29	8	3.79	13	9.29	21	5.98
TOTAL, GROUP VII: GENERAL CULTURAL	2	2.08	5	4.35	1	1.51	1	1.35	3	1.85	6	3.18	7	3.32	2	1.42	9	2.56
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	3	3.12	3	2.61	2	3.02	2	2.70	5	3.09	5	2.65	6	2.84	4	2.85	10	2.84
TOTAL, LEVEL 1	6	6.25	6	5.22	6	9.07	6	8.10	12	7.42	12	6.35	12	5.69	12	8.56	24	6.82
TOTAL, LEVEL 2	22	22.91	15	13.05	9	13.63	7	9.45	31	19.14	22	11.63	37	17.53	16	11.42	59	16.80
TOTAL, LEVEL 3	52	54.16	73	63.48	40	60.61	41	55.39	92	56.79	114	60.31	125	59.24	81	57.85	206	59.51
TOTAL, LEVEL 4	10	10.41	12	10.44	9	13.62	13	17.56	19	11.73	25	13.23	22	10.42	22	15.71	35	9.96
TOTAL, LEVEL 5	2	2.08	5	4.35	1	1.51	1	1.35	3	1.85	6	3.17	7	3.32	2	1.43	9	2.56
TOTAL, LEVEL 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DON'T KNOW	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
INCORRECT RESPONSE	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
NO RESPONSE	4	4.17	2	1.74	1	1.51	4	5.40	5	3.09	6	3.17	6	2.84	5	3.57	11	3.13
TOTAL RESPONSES	96	99.98	115	100.03	66	99.95	74	99.95	162	100.02	189	100.00	211	99.99	140	99.96	351	99.91

TABLE XVIII

TABULATION OF DATA FOR QUESTION 5a, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
LEVEL 1 (NONE)																		
LEVEL 2																		
SOCIAL WORKER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 3																		
CATERESS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 4																		
BEAUTICIAN	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
HOUSEWIFE	60	62.50	69	60.00	34	51.51	39	52.70	94	58.02	108	57.14	129	61.14	73	52.14	202	57.55
POLICEWOMAN	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LEVEL 5																		
COOK	0	0	0	0	3	4.54	0	0	3	1.85	0	0	0	0	3	2.14	3	.85
WAITRESS	1	1.04	1	.87	2	3.03	0	0	3	1.85	1	.53	2	.95	2	1.43	4	1.14
LEVEL 6 (NONE)																		
GROUP II: BUSINESS CONTACT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
SALESWOMAN	0	0	1	.87	3	4.54	1	1.35	3	1.85	2	1.06	1	.47	4	2.86	5	1.42
LEVEL 4																		
STORE CLERK	2	2.08	4	3.48	0	0	4	5.40	2	1.23	8	4.23	6	2.84	4	2.86	10	2.85
RECEPTIONIST	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE XVIII (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP III: ORGANIZATION																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
ACCOUNTANT	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
BUSINESS EXECUTIVE (MINOR)	0	0	0	0	3	4.54	0	0	3	1.85	0	0	0	0	3	2.14	3	.85
MANAGER, ADVERTISING	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LEVEL 4																		
BOOKKEEPER	3	3.12	2	1.74	0	0	0	0	3	1.85	2	1.06	5	2.37	0	0	5	1.42
CASHIER	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
SECRETARY	9	9.37	3	2.61	6	9.09	5	6.70	15	9.26	8	4.26	12	5.69	11	7.86	23	6.55
LEVEL 5																		
FILE CLERK	2	2.08	1	.87	0	0	0	0	2	1.23	1	.53	3	1.42	0	0	3	.85
TYPIST	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
LEVEL 6 (NONE)																		
GROUP IV: TECHNOLOGY																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4																		
IBM OPERATOR	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
SEAMSTRESS	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LEVEL 5																		
COIL WINDER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DRY-CLEANER WORKER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
FACTORY WORKER	2	2.08	1	.87	0	0	0	0	2	1.23	1	.53	3	1.42	0	0	3	.85
BARBER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 6 (NONE)																		

TABLE XVIII (CONTINUED)

OCCUPATION	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP V: OUTDOOR																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VI: SCIENCE																		
LEVEL 1																		
DOCTOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 2 (NONE)																		
LEVEL 3 (NONE)																		
LEVEL 4																		
LABORATORY ASS'T.	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
GROUP VII: GENERAL CULTURAL																		
LEVEL 1 (NONE)																		
LEVEL 2																		
TEACHER	1	1.04	3	2.61	2	3.03	1	1.35	3	1.85	4	2.12	4	1.90	3	2.14	7	1.99
LEVEL 3																		
JOURNALIST	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
LEVEL 4 (NONE)																		
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		

TABLE XVIII (CONTINUED)

RESPONSE	7th GRADE GIRLS No.	7th GRADE GIRLS %	7th GRADE BOYS No.	7th GRADE BOYS %	8th GRADE GIRLS No.	8th GRADE GIRLS %	8th GRADE BOYS No.	8th GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7th GRADE No.	7th GRADE %	8th GRADE No.	8th GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
LEVEL 1 (NONE)																		
LEVEL 2 (NONE)																		
LEVEL 3																		
INTERIOR DECORATOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LEVEL 4																		
PHOTOGRAPHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
LEVEL 5 (NONE)																		
LEVEL 6 (NONE)																		
DON'T KNOW	0	0	2	1.74	2	3.03	2	2.70	2	1.23	4	2.12	2	.95	4	2.86	6	1.71
INCORRECT RESPONSE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
NO RESPONSE	7	7.29	18	15.65	8	12.12	16	21.62	15	9.26	34	17.99	25	11.85	24	17.14	49	13.96
TOTAL RESPONSES	96	99.99	115	100.01	66	99.96	74	99.92	162	99.98	189	100.02	211	99.98	140	99.97	351	99.98

TABLE [illegible]18

SUMMARY OF DATA FOR QUESTION 5b, "WHAT KIND OF WORK DOES YOUR MOTHER DO?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
TOTAL, GROUP I: SERVICE*	4	4.16	2	1.74	6	9.09	1	1.35	10	6.17	3	1.59	6	2.84	7	4.99	13	3.69
TOTAL, GROUP II: BUSINESS CONTACT	3	3.12	5	4.35	3	4.54	5	6.75	6	3.70	10	5.29	8	3.79	8	5.72	16	4.55
TOTAL, GROUP III: ORGANIZATION	17	17.70	7	6.09	10	15.15	7	9.46	27	16.67	14	7.41	24	11.37	17	12.15	41	11.68
TOTAL, GROUP IV: TECHNOLOGY	4	4.16	3	2.61	1	1.51	1	1.35	5	3.09	4	2.12	7	3.32	2	1.43	9	2.56
TOTAL, GROUP V: OUTDOOR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL, GROUP VI: SCIENCE	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.94	0	0	2	.56
TOTAL, GROUP VII: GENERAL CULTURE	1	1.04	5	4.35	2	3.03	2	2.70	3	1.85	7	3.71	6	2.85	4	2.84	10	2.84
TOTAL, GROUP VIII: ARTS & ENTERTAINMENT	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.56
TOTAL, LEVEL 1	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
TOTAL, LEVEL 2	2	2.08	3	2.61	2	3.03	1	1.35	4	2.47	4	2.12	5	2.37	3	2.14	8	2.27
TOTAL, LEVEL 3	1	1.04	5	4.35	8	12.11	2	2.70	9	5.56	7	3.71	6	2.84	10	7.13	16	4.54
TOTAL, LEVEL 4	21	21.88	13	11.31	6	9.09	11	14.86	27	16.66	23	12.17	33	15.63	17	12.14	50	14.23
TOTAL, LEVEL 5	5	5.20	3	2.61	6	9.09	3	4.05	11	6.79	7	3.71	9	4.27	9	6.43	18	5.12
TOTAL, LEVEL 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DON'T KNOW	0	0	2	1.74	2	3.03	2	2.70	2	1.23	4	2.12	2	.95	4	2.86	6	1.71
INDEFINITE RESPONSE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
NO RESPONSE	7	7.29	18	15.65	8	12.12	16	21.62	15	9.26	34	17.99	25	11.85	24	17.14	49	13.96
HOUSEWIFE	60	62.50	69	60.00	34	51.51	39	52.70	94	58.02	108	57.14	129	61.14	73	52.14	202	57.55
TOTAL RESPONSES	96	99.97	115	100.01	66	99.98	74	99.98	162	99.98	189	100.32	211	99.99	140	99.98	351	99.94

TABLE XX

TABULATION OF DATA FOR QUESTION 6b, "HAS A FRIEND OR RELATIVE INFLUENCED YOUR CHOICE OF BOOK?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	3	3.12	3	2.61	10	15.15	6	8.11	13	8.02	9	4.76	6	2.84	16	11.43	22	6.27
No	18	18.75	15	13.04	13	19.70	10	13.51	31	19.14	25	13.23	33	15.64	23	16.43	56	15.95
No Response	75	78.12	97	84.35	43	65.15	58	78.38	118	72.84	155	82.01	172	81.52	101	72.14	273	77.78
Total Responses	96	99.99	115	100.00	66	100.00	74	100.00	162	100.00	189	100.00	211	100.00	140	100.00	351	100.00

TABLE XXI

TABULATION OF DATA FOR QUESTION 6a, ("HAS A FRIEND OR RELATIVE INFLUENCED YOUR CHOICE OF CAREER") "IF YES, HOW?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		9TH GRADE GIRLS		9TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		9TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
BY DISCUSSING IT WITH ME	0	0	0	0	2	3.03	1	1.35	2	1.23	1	.53	0	0	3	2.14	3	.85
BY ENCOURAGING ME TO GO INTO IT	0	0	0	0	3	4.54	1	1.35	3	1.85	1	.53	0	0	4	2.86	4	1.14
BY GETTING ME INTERESTED IN IT	0	0	0	0	1	1.51	2	2.70	1	.62	2	1.06	0	0	3	2.14	3	.85
BY TEACHING ME HOW TO DO IT	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
BY TELLING ME HOW TO DO IT	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
BY TELLING ME I COULD BE GOOD AT IT	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
BY TELLING ME I HAD TALENT	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
BY TELLING ME IT WAS A GOOD JOB	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
BY TELLING ME THAT A GOOD EDUCATION IS IMPORTANT	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
I WANT TO FOLLOW HIS EXAMPLE	0	0	1	.67	3	4.54	1	1.35	3	1.85	2	1.06	1	.47	4	2.86	5	1.42
TOTAL RESPONSES	3	3.12	3	2.01	10	15.13	6	8.10	13	8.02	9	4.77	6	2.83	16	11.42	22	6.23

TABLE XXII

TABULATION OF DATA FOR QUESTION 3b, "HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?"

RESPONSE	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	5	5.21	9	7.83	11	16.67	5	6.76	16	9.88	14	7.41	14	6.63	16	11.43	30	8.55
No	17	17.71	14	12.17	19	28.79	16	21.62	36	22.22	30	15.87	31	14.69	35	25.00	66	18.80
No Response	74	77.08	92	80.00	36	54.54	53	71.62	110	67.90	145	76.72	166	78.67	89	63.57	255	72.65
TOTAL RESPONSES	96	100.00	115	100.00	66	100.00	74	100.00	162	100.00	189	100.00	211	99.99	140	100.00	351	100.00

TABLE XXIII

TABULATION OF DATA FOR QUESTION 7a ("HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?"), "IF YES, WHAT CAREER WAS SUGGESTED?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
ADVERTISING MANAGER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ARTIST	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.28
ASTRONOMER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
AUTHOR	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
BIOLOGIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DOCTOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
ROCKET DESIGNER	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
JOURNALIST	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
LAWYER	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
MODEL	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.28
OCEANOGRAPHER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
POET	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
POLITICIAN	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.28
REAL ESTATE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SCIENTIST	0	0	2	1.74	1	1.52	0	0	1	.62	2	1.06	2	.95	1	.71	3	.85
SPEECH THERAPIST	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
TEACHER	1	1.04	2	1.74	2	3.03	0	0	3	1.85	2	1.06	3	1.42	2	1.43	5	1.42
INDEFINITE RESPONSE	0	0	1	.87	1	1.52	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
NO RESPONSE	91	94.79	106	92.17	55	83.33	69	93.24	146	90.12	175	92.59	197	93.36	124	88.57	321	91.45
TOTAL RESPONSES	96	99.99	115	100.00	66	99.97	74	99.99	162	100.01	189	100.01	211	99.97	140	100.01	351	99.99

TABLE XXIV

TABULATION OF DATA FOR QUESTION 7b ("HAS ANYONE AT SCHOOL SUGGESTED A CAREER FOR YOU?"), "IF YES, WHO?"

Response	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
A Friend in School	0	0	1	.87	3	4.54	0	0	3	1.85	1	.53	1	.47	3	2.14	4	1.14
Fifth Grade Teacher	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
School Doctor	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
Science Teacher	1	1.04	3	2.61	0	0	1	1.35	1	.62	4	2.12	4	1.90	1	.71	5	1.42
Sixth Grade Teacher	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
Social Studies Teacher	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
Teacher	1	1.04	4	3.48	5	7.58	2	2.70	6	3.70	6	3.17	5	2.37	7	5.00	12	3.42
Irrelevant Response	0	0	0	0	2	3.03	2	2.70	2	1.23	2	1.06	0	0	4	2.86	4	1.14
No Response	91	94.79	106	92.17	55	83.33	69	93.24	146	90.12	175	92.59	197	93.36	124	88.57	321	91.45
Total Responses	96	99.99	115	100.00	66	99.99	74	99.99	162	100.01	189	100.02	211	99.99	140	99.99	351	99.97

TABLE XXV

TABULATION OF DATA FOR QUESTION 8a, "DO YOU ADMIRE A FAMOUS PERSON CONNECTED WITH THE KIND OF WORK YOU WANT TO DO?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Students	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	18	18.75	20	17.39	30	45.45	25	33.78	48	29.63	45	23.81	38	18.01	55	39.29	93	26.50
No	30	31.25	36	31.30	21	31.82	18	24.32	51	31.48	54	28.57	66	31.28	39	27.86	105	29.91
No response	48	50.00	59	51.30	15	22.73	31	41.89	63	38.89	90	47.62	107	50.71	46	32.86	153	43.59
Total responses	96	100.00	115	99.99	66	100.00	74	99.99	162	100.00	189	100.00	211	100.00	140	100.01	351	100.00

TABLE XXVI

TABULATION OF DATA FOR QUESTION 9a ("DO YOU ADMIRE A FAMOUS PERSON CONNECTED WITH THE KIND OF WORK YOU WANT TO DO?"), "IF YES, WHO IS THIS PERSON?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
POPE, FRANCOIS (CHEF)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
GROUP II: BUSINESS CONTACT (NONE)																		
GROUP III: ORGANIZATION (NONE)																		
GROUP IV: TECHNOLOGY																		
FORD, HENRY (INVENTOR)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP V: OUTDOOR (NONE)																		
GROUP VI: SCIENCE																		
BARTON, CLARA (NURSE)	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
FREUD, SIGMUND (PSYCHOANALYST)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
NIGHTINGALE, FLORENCE (NURSE)	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
OUR FAMILY DOCTOR	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
REED, WALTER (DOCTOR)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SALK, JONAS (RESEARCH SCIENTIST)	1	1.04	2	1.74	1	1.51	3	4.05	2	1.23	5	2.64	3	1.42	4	2.86	7	1.99
VON BRAUN, WERNER (RESEARCH SCIENTIST)	0	0	2	1.74	0	0	3	4.05	0	0	5	2.64	2	.95	3	2.14	5	1.42
GROUP VII: GENERAL CULTURAL																		
DARROW, CLARENCE (LAWYER)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
KILGALLEN, D. (JOURN.)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
MY TEACHER	2	2.08	0	0	4	6.06	0	0	6	3.70	0	0	2	.95	4	2.86	6	1.71

TABLE XX (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	%	7TH GRADE BOYS No.	%	8TH GRADE GIRLS No.	%	8TH GRADE BOYS No.	%	GIRLS No.	%	BOYS No.	%	7TH GRADE No.	%	8TH GRADE No.	%	TOTAL SUBJECTS No.	%
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
ALCOTT, LOUISA M. (AUTHOR)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
ALONSO, ALICIA (BALLERINA)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
BANKS, ERNIE (BASEBALL PLAYER)	0	0	3	2.61	1	1.52	4	5.40	1	.62	7	3.70	3	1.42	5	3.57	8	2.29
BREWER, TERESA (VOCALIST)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
CURTIS, TONY (FILM ACTOR)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
FUNICELLO, ANNETTE (VOCALIST)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.29
GARNER, JAMES (TELEVISION ACTOR)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.29
GARSON, GREER (FILM ACTRESS)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
[illegible], KENNETH (PHOTOGRAPHER)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.29
HEISS, CAROL (SKATER)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.29
LEIGH, JANET (FILM ACTRESS)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.29
LIBERACE, (PIANIST)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
LYNLEY, CAROL (FILM ACTRESS)	0	0	0	0	1	1.52	0	0	1	.62	0	0	0	0	1	.71	1	.29
MANTLE, MICKEY (BASEBALL PLAYER)	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
MILLER, HOWARD (DISC JOCKEY)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.29
MINOSO, MINNIE (BASEBALL PLAYER)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.29
NOVAK, KIM (FILM ACTRESS)	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57

TABLE XX[illegible] (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VIII: (CONT.)																		
ARTS & ENTERTAINMENT																		
PARKER, SUZY (MODEL)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PAVLOVA, ANNA (BALLERINA)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
PIERSALL, JIM (BASEBALL PLAYER)	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
REYNOLDS, DEBBIE (FILM ACTRESS)	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
RUTH, BABE (BASEBALL PLAYER)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
TAYLOR, ELIZABETH (FILM ACTRESS)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
VARSI, DIANE (FILM ACTRESS)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
WILLIAMS, ESTHER (FILM ACTRESS)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
WILLIAMS, TED (BASEBALL PLAYER)	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
OTHERS:																		
BY AUNT	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
BY COUSIN	1	1.04	1	.87	1	1.51	1	1.35	2	1.23	2	1.06	2	.93	2	1.43	4	1.14
BY FATHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
BY FRIEND	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
BY NEIGHBOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
BY SISTER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
BY UNCLE	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
INCORRECT RESPONSE	1	1.04	3	2.61	0	0	0	0	1	.62	3	1.59	4	1.90	0	0	4	1.14
NO RESPONSE	82	85.42	96	83.48	37	56.06	49	66.22	119	73.46	145	76.72	178	84.36	86	61.43	264	75.21
TOTAL RESPONSES	96	99.98	115	100.01	66	99.89	74	99.97	162	100.04	189	100.01	211	99.95	140	99.91	351	99.83

TABLE XCVIII

TABULATION OF DATA FOR QUESTION 9a, "HAVE YOU READ ANY BOOKS OR STORIES ABOUT THE KIND OF WORK YOU WANT TO DO?"

RESPONSE	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	13	13.54	18	15.65	20	30.30	23	31.08	33	20.37	41	21.69	31	14.69	43	30.71	74	21.08
NO	30	31.25	37	32.17	38	57.58	31	41.89	68	41.97	68	35.98	67	31.75	69	49.29	136	38.75
NO RESPONSE	53	55.21	60	52.17	8	12.12	20	27.03	61	37.65	80	42.33	113	53.55	28	20.00	141	40.17
TOTAL RESPONSES	96	100.00	115	99.99	66	100.00	74	100.00	162	99.99	189	100.00	211	99.99	140	100.00	351	100.00

TABLE XXVIII

TABULATION OF DATA FOR QUESTION 9b ("HAVE YOU READ ANY BOOKS OR STORIES ABOUT THE KIND OF WORK YOU WANT TO DO?"), "IF YES, NAME THE BOOKS YOU HAVE READ."

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
CAROL BRENT, AIR STEWARDESS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DETECTIVE STORIES	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
HOME METHODS OF SPEECH CORRECTION	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NANCY DREW	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
PERRY MASON	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
TRAVEL IN THE AIR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
VICKY BARR, STEWARDESS	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
WAR SERGEANT	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP II: BUSINESS CONTACT (NONE)																		
GROUP III: ORGANIZATION (NONE)																		
GROUP IV: TECHNOLOGY																		
ALL ABOUT TOOLS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ENGINEERING, DRAWING & GEOMETRY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
HOT RODS FOR MECHANICS	0	0	1	.67	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
MISSING MEN OF SATURN	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SPACE PILOTS	0	0	1	.67	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
STEP TO THE STARS	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
THERE'S ADVENTURE IN ELECTRONICS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP V: OUTDOOR																		
ANIMAL BOOKS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
FORESTRY AND CONSERVATION	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28

TABLE XXVIII (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VI: SCIENCE																		
ALL ABOUT THE HUMAN BODY	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
ASTRONOMY BOOKS	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
BOY SCIENTIST, THE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
CHERRY AMES, STUDENT NURSE	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
CLARA BARTON	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
FLORENCE NIGHTINGALE	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
GEOLOGY BOOKS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
HUMAN BIOLOGY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
FAMOUS MEN IN MEDICINE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MAGIC, MYTH AND MEDICINE	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PREHISTORIC AMERICA	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SCIENCE BOOKS	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SCIENCE FICTION	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SIGMUND FREUD	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SOLDIER DOCTOR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STARS AND PLANETS	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SUE BARTON, STUDENT NURSE	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
SUE BARTON, SENIOR NURSE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
GROUP VII: GENERAL CULTURAL																		
HOW TO TEACH	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
KATE, NEW TEACHER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
KATHRYN, NURSERY SCHOOL TEACHER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LAD BOOKS	0	0	1	.67	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
WILDERNESS TEACHER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28

TABLE XXVI.. (CONTINUED)

Response	7th Grade Girls No.	7th Grade Girls %	7th Grade Boys No.	7th Grade Boys %	8th Grade Girls No.	8th Grade Girls %	8th Grade Boys No.	8th Grade Boys %	Girls No.	Girls %	Boys No.	Boys %	7th Grade No.	7th Grade %	8th Grade No.	8th Grade %	Total Subjects No.	Total Subjects %
Group VIII:																		
Arts & Entertainment																		
All-American Fullback	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Angel on Skis	1	1.04	0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Any Bones	0	0	0	0	1	1.51	0	0	1	.42	0	0	0	0	1	.71	1	.28
Art of Dancing, The	1	1.04	0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Babe Ruth Story, The	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
Baseball Stories	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
Baseball's Greatest Players	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Bill Stern's Baseball Stories	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
Boy from the Sandlots, The	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
Bussy Plays Football	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Fear Strikes Out	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Jacky Robinson	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Let's Dance	1	1.04	0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Lou Gehrig Story, The	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
Modelling	1	1.04	0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Plays	0	0	0	0	1	1.51	0	0	1	.42	0	0	0	0	1	.71	1	.28
Prima Ballerina	1	1.04	0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Stars in Her Eyes	1	1.04	.0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Story of Anna Pavlova, The	0	0	0	0	1	1.51	0	0	1	.42	0	0	0	0	1	.71	1	.28
Spinners	1	1.04	0	0	0	0	0	0	1	.42	0	0	1	.47	0	0	1	.28
Up Goes the Curtain	0	0	0	0	1	1.51	0	0	1	.42	0	0	0	0	1	.71	1	.28
No Response	83	86.46	98	85.22	40	72.73	53	71.62	131	80.86	151	79.89	181	85.78	101	72.14	282	80.34
Total Responses	96	99.88	115	100.01	55	99.99	74	99.97	162	100.00	189	100.03	211	99.89	140	99.85	351	99.74

TABLE XXIX

TABULATION OF DATA FOR QUESTION 18a, "HAS A CHARACTER IN A BOOK INFLUENCED YOUR CHOICE OF WORK?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
YES	5	5.21	4	3.48	7	10.61	7	9.46	12	7.41	11	5.82	9	4.26	14	10.00	23	6.55
NO	30	31.25	22	19.13	28	42.42	23	31.08	58	35.80	45	23.81	52	24.64	51	36.43	103	29.34
NO RESPONSE	61	63.54	89	77.39	31	46.97	44	59.46	92	56.79	133	70.37	150	71.09	75	53.57	225	64.10
TOTAL RESPONSES	96	100.00	115	100.00	66	100.00	74	100.00	162	100.00	189	100.00	211	99.99	140	100.00	351	99.99

TABLE XXX

TABULATION OF DATA FOR QUESTION 40 ("HAS A CHARACTER IN A BOOK INFLUENCED YOUR CHOICE OF WORK?"). "IF YES, NAME THE CHARACTER."

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
BARR, VICKY (AIR STEWARDESS)	0	0	0	0	1	1.31	0	0	1	.61	0	0	0	0	1	.71	1	.28
DREW, NANCY (AMATEUR DETECTIVE)	1	1.04	0	0	0	0	0	0	1	.61	0	0	1	.47	0	0	1	.28
MASON, PERRY (DETECTIVE)	0	0	0	0	1	1.31	0	0	1	.61	0	0	0	0	1	.71	1	.28
GROUP II: BUSINESS CONTACT (NONE)																		
GROUP III: ORGANIZATION (NONE)																		
GROUP IV: TECHNOLOGY																		
SWIFT, TOM (AMATEUR INVENTOR)	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
GROUP V: OUTDOOR (NONE)																		
GROUP VI: SCIENCE																		
AMES, CHERRY (NURSE)	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
BARTON, SUE (NURSE)	1	1.04	0	0	1	1.31	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
TRENT, CAROL (NURSE)	0	0	0	0	1	1.31	0	0	1	.61	0	0	0	0	1	.71	1	.28
GROUP VII: GENERAL CULTURAL (NONE)																		

TABLE XXX (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
PAVLOVA, ANNA (BALLERINA)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
PIERSALL, JIM (BASEBALL PLAYER)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ROBINSON, JACKIE (BASEBALL PLAYER)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
RUTH, BABE (BASEBALL PLAYER)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SPORTS STARS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
INCORRECT RESPONSE	0	0	2	1.74	1	1.51	0	0	1	.62	2	1.06	2	.95	1	.71	3	.85
NO RESPONSE	92	95.83	111	96.52	60	90.91	69	93.24	152	93.83	180	95.24	203	96.21	129	92.14	332	94.59
TOTAL RESPONSES	96	99.99	115	100.00	66	99.97	74	99.99	162	100.04	189	100.01	211	99.99	140	99.97	351	99.96

TABLE XXXI

TABULATION OF DATA FOR QUESTION #6a, "HAS A MAGAZINE INFLUENCED YOUR CHOICE OF HOME?"

RESPONSE	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	10	10.42	12	10.43	14	21.21	12	16.22	24	14.81	24	12.70	22	10.43	26	18.57	48	13.67
NO	25	26.04	28	24.35	26	39.39	31	41.89	51	31.48	59	31.22	53	25.12	57	40.71	110	31.34
NO RESPONSE	61	63.54	75	65.22	26	39.39	31	41.89	87	53.70	106	56.08	136	64.45	57	40.71	193	54.99
TOTAL RESPONSES	96	100.00	115	100.00	66	99.99	74	100.00	162	99.99	189	100.00	211	100.00	140	99.99	351	100.00

TABLE XXXII

TABULATION OF DATA FOR QUESTION #20 ("HAS A MAGAZINE INFLUENCED YOUR CHOICE OF HOBBY"), "IF YES, NAME THE MAGAZINE."

RESPONSE	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE (NONE)																		
GROUP II: BUSINESS CONTACT (NONE)																		
GROUP III: ORGANIZATION (NONE)																		
GROUP IV: TECHNOLOGY																		
POPULAR ELECTRONICS	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
POPULAR MECHANICS	0	0	3	2.61	0	0	3	4.05	0	0	6	3.17	3	1.42	3	2.14	6	1.71
GROUP V: OUTDOOR																		
HOARD'S DAIRYMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SUCCESSFUL FARMING	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP VI: SCIENTIFIC																		
NATIONAL GEOGRAPHIC	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP VII: GENERAL CULTURAL																		
AMERICAN GIRL	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	1	.71	3	.85
CHICAGO TRIBUNE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
JUNIOR SCHOLASTIC	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
LIFE	2	2.08	3	2.61	2	3.03	1	1.35	4	2.47	4	2.12	5	2.37	3	2.14	8	2.28
LOOK	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
MAD MAGAZINE	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
READER'S DIGEST	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
REDBOOK	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SEVENTEEN	2	2.08	0	0	2	3.03	0	0	4	2.47	0	0	2	.95	2	1.43	4	1.14
TIME	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
U. S. NEWS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28

TABLE XXXII (CONTINUED)

Response	7th Grade Girls No.	7th Grade Girls %	7th Grade Boys No.	7th Grade Boys %	8th Grade Girls No.	8th Grade Girls %	8th Grade Boys No.	8th Grade Boys %	Girls No.	Girls %	Boys No.	Boys %	7th Grade No.	7th Grade %	8th Grade No.	8th Grade %	Total Subjects No.	Total Subjects %
GROUP VIII: ARTS & ENTERTAINMENT																		
Annette Magazine	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
Charm	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
Photoplay	3	3.12	0	0	1	1.51	0	0	4	2.47	0	0	3	1.42	1	.71	4	1.14
Silver Screen	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
Sports Illustrated	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
No Response	86	89.58	103	89.57	52	78.79	62	83.78	138	85.19	165	87.30	189	89.57	114	81.43	303	86.32
Total Responses	96	99.98	115	100.01	66	99.96	74	99.98	162	100.02	189	100.01	211	99.99	140	99.94	351	99.93

TABLE XXXIII

TABULATION OF DATA FOR QUESTION 10C, "HAS A TELEVISION OR RADIO PROGRAM INFLUENCED YOUR CHOICE OF WORK?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	3	3.12	11	9.56	8	12.12	8	10.81	11	6.79	19	10.05	14	6.63	16	11.43	30	8.55
No	17	17.71	12	10.43	12	18.18	10	13.51	29	17.90	22	11.64	29	13.74	22	15.71	51	14.53
No Response	76	79.17	92	80.00	46	69.70	56	75.68	122	75.31	148	78.31	168	79.62	102	72.86	270	76.92
Total Responses	96	100.00	115	99.99	66	100.00	74	100.00	162	100.00	189	100.00	211	99.99	140	100.00	351	100.00

TABLE XXXIV

TABULATION OF DATA FOR QUESTION 10F ("HAS A TELEVISION OR RADIO PROGRAM INFLUENCED YOUR CHOICE OF WORK?"), "IF YES, NAME THE PROGRAM."

PROGRAMS	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
PERRY MASON (DETECTIVE)	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
GROUP II: BUSINESS CONTACT (NONE)																		
GROUP III: ORGANIZATION																		
PRIVATE SECRETARY	1	1.04	0	0	0	0	0	0	1	.52	0	0	1	.47	0	0	1	.28
GROUP IV: TECHNOLOGY																		
REX KING (AVIATOR)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
STEVE CANYON (AVIATOR)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP V: OUTDOOR																		
SEA HUNT (SKIN DIVER)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP VI: SCIENCE																		
BELL'S SCIENCE SERIES	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MEDIC (DOCTOR, ETC.)	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
OMNIBUS (SCIENCE, ETC.)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP VII: GENERAL CULTURAL (NONE)																		

TABLE XXXIV (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
BASEBALL WITH BRICKHOUSE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
BELL TELEPHONE SERIES (VARIETY)	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
CHILDREN'S PROGRAMS																		
DISNEYLAND	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
LASSIE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
NOAH'S ARK	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
MICKEY MOUSE CLUB	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
ROMPER ROOM	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
G.E. THEATRE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
PLAYHOUSE 90	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
RED SKELTON	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
STEVE ALLEN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
WIND (RADIO STATION)	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57
WJJD (RADIO STATION)	1	1.04	1	.87	1	1.51	0	0	2	1.23	1	.53	2	.95	1	.71	3	.85
NO RESPONSE	93	96.87	104	90.43	58	87.88	66	89.20	151	93.21	170	89.95	197	93.36	124	88.57	321	91.45
TOTAL RESPONSES	96	99.99	115	100.00	66	99.96	74	100.00	162	100.02	189	100.02	211	99.96	140	99.96	351	99.92

TABLE XXXV

TABULATION OF DATA FOR QUESTION 10B, "HAS A MOVIE INFLUENCED YOUR CHOICE OF WORK?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
YES	3	3.12	3	2.61	8	12.12	3	4.05	11	6.79	6	3.17	6	2.84	11	7.86	17	4.84
NO	6	6.25	7	6.09	12	18.18	9	12.16	18	11.11	16	8.47	13	6.16	21	15.00	34	9.69
NO RESPONSE	87	90.62	105	91.30	46	69.70	62	83.78	133	82.10	167	88.36	192	90.99	108	77.14	300	85.47
TOTAL RESPONSES	96	99.99	115	100.00	66	100.00	74	99.99	162	100.00	189	100.00	211	99.99	140	100.00	351	100.00

TABLE XXXVI

TABULATION OF DATA FOR QUESTION 10a ("HAS A MOVIE INFLUENCED YOUR CHOICE OF WORK?"), "IF YES, NAME THE MOVIE."

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
THE HIGH AND THE MIGHTY (AIR STEWARDESS)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
GROUP II: BUSINESS CONTACT (NONE)																		
GROUP III: ORGANIZATION (NONE)																		
GROUP IV: TECHNOLOGY																		
BOMBERS B-52 (AVIATOR)	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
JET PILOT (AVIATOR)	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP V: OUTDOOR																		
ANIMAL PICTURES	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
GROUP VI: SCIENCE (NONE)																		
GROUP VII: GENERAL CULTURAL																		
BELLS OF ST. MARY'S, THE (TEACHER)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
COMPULSION (LAWYER)	0	0	2	1.74	0	0	0	0	0	0	2	1.05	2	.95	0	0	2	.57

TABLE XXXVI (CONTINUED)

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Group VIII:																		
Arts & Entertainment																		
April Love (singer)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
Fear Strikes Out (baseball player)	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
Portrait of Jenny (artist)	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
Red Shoes, The (ballerina)	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
Show Boat (singer)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
Stage Struck (actress)	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
Star is Born, A (actress)	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
No Response	93	96.87	112	97.39	58	87.88	71	95.95	151	93.21	183	96.83	205	97.16	129	92.14	334	95.16
Total Responses	96	99.90	115	100.00	66	99.97	74	100.03	162	100.01	189	100.01	211	99.99	140	99.97	351	99.96

TABLE XXXVII

TABULATION OF DATA FOR QUESTION 88A, "DO YOU LIKE SCHOOL?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	77	80.20	72	62.61	57	86.36	41	55.41	134	82.72	113	59.79	149	70.62	98	70.00	247	70.37
NO	13	13.54	30	26.09	4	6.06	27	36.49	17	10.49	57	30.16	43	20.38	31	22.14	74	21.08
MIXED RESPONSE "PARTS OF IT," "SOMETIMES," "YES AND NO," ETC.	6	6.25	12	10.43	3	4.54	6	8.11	9	5.56	18	9.52	18	8.53	9	6.43	27	7.69
NO RESPONSE	0	0	1	.87	2	3.03	0	0	2	1.23	1	.53	1	.47	2	1.43	3	.85
TOTAL RESPONSES	96	99.99	115	100.00	66	99.99	74	100.01	162	100.00	189	100.00	211	100.00	140	100.00	351	99.99

TABLE XXXVIII

TABULATION OF DATA FOR QUESTION 11B, "IN WHAT SUBJECT DO YOU GET YOUR BEST MARKS?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.*	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
English	15.53	16.18	4.42	3.84	11.33	17.17	3.36	4.54	26.86	16.58	7.78	4.16	19.95	9.45	14.69	10.49	34.64	9.57
History	1.33	1.38	.25	.22	.50	.76	.75	1.01	1.83	1.13	1.00	.53	1.58	.75	1.25	.89	2.83	.81
Home Economics	2.33	2.43	—	—	5.08	7.70	—	—	7.41	4.57	—	—	7.83**	3.71**	11.91**	8.51**	19.74**	5.62**
Mathematics	15.62	16.27	27.00	23.48	12.33	18.68	25.11	33.93	27.95	17.25	52.11	27.57	42.62	20.20	37.44	26.74	80.06	22.81
Music	4.17	4.34	1.58	1.37	2.83	4.29	2.53	3.42	7.00	4.32	4.11	2.17	5.75	2.72	5.36	3.83	11.11	3.16
Physical Education	4.53	4.72	12.17	10.58	4.75	7.20	7.17	9.79	9.28	5.73	19.34	10.23	16.70	7.91	11.92	8.51	28.62	8.15
Science	16.28	16.96	23.67	20.58	10.25	15.53	13.61	18.39	26.53	16.38	37.28	19.72	39.95	18.93	23.86	17.04	63.81	18.18
Shop	—	—	5.50	4.78	—	—	6.83	9.23	—	—	12.33	6.52	—	—	—	—	—	—
Social Studies	10.95	11.41	20.00	17.39	12.42	18.82	6.04	8.16	23.37	14.43	26.04	13.78	30.95	14.67	18.46	13.18	49.41	14.08
Spelling	19.25	20.05	6.42	5.58	5.50	8.33	4.58	6.19	24.75	15.28	11.00	5.82	25.67	12.17	10.08	7.20	35.75	10.18

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*If one student lists two subjects, each is scored ½ response; if three subjects are given, each is scored 1/3 response, etc.

**Home economics and shop totalled for comparative purposes.

TABLE XXXVIII (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
DON'T KNOW																		
INCORRECT RESPONSE																		
NO RESPONSE	4.00	4.17	10.00	8.70	1.00	1.51	3.00	4.05	5.00	3.09	13.00	6.88	14.00	6.63	4.00	.71	18.00	5.13
OTHER RESPONSES I.E., "NONE," "THEM ALL," ETC.																		
OTHER SUBJECTS I.E., ART, HEALTH, ETC.	2.00	2.08	4.00	3.48	0	0	1.00	1.35	2.00	1.23	5.00	2.64	6.00	2.84	1.00	2.86	7.00	1.99
TOTAL RESPONSES	95.99	99.99	115.01	100.00	65.99	99.99	73.98	100.05	61.98	99.99	88.99	100.02	211.00	99.98	139.97	99.96	350.97	99.98

TABLE XXXIX

TABULATION OF DATA FOR QUESTION 11C, "IN WHAT SUBJECT DO YOU GET YOUR POOREST MARKS?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ENGLISH	14.67	15.28	29.50	25.65	7.00	10.61	27.33	36.93	21.67	13.38	56.83	30.07	44.17	20.93	34.33	24.52	78.50	22.36
HISTORY	1.00	1.04	0	0	0	0	1.00	1.35	1.00	.62	1.00	.53	1.00	.47	1.00	.71	2.00	.57
HOME ECONOMICS	2.20	2.29	—	—	3.00	4.54	—	—	5.20	3.21	—	—	2.53*	1.20*	4.00*	2.86*	6.53*	1.86*
MATHEMATICS	17.53	18.26	14.50	12.61	23.00	34.85	6.50	8.78	40.53	25.02	21.00	11.11	32.03	15.18	29.50	21.07	61.53	17.53
MUSIC	3.50	3.65	11.00	9.56	2.00	3.03	2.00	2.70	5.50	3.39	13.00	6.88	14.50	6.87	4.00	2.86	18.50	5.27
PHYSICAL ED.	2.70	2.81	1.33	1.16	0	0	4.00	5.40	2.70	1.67	5.33	2.82	4.03	1.91	4.00	2.86	8.03	2.29
SCIENCE	17.03	17.74	22.83	19.85	9.50	14.39	5.83	7.88	26.53	16.38	28.66	15.16	39.86	18.89	15.33	10.95	55.19	15.72
SHOP	—	—	.33	.29	—	—	1.00	1.35	—	—	1.33	.70	—	—	—	—	—	—
SOCIAL STUDIES	14.87	15.49	11.00	9.58	12.50	18.94	14.83	20.04	27.37	16.89	25.83	13.67	25.87	12.26	27.33	19.52	53.20	15.16
SPELLING	2.50	2.60	6.50	5.65	3.00	4.54	3.50	4.73	5.50	3.39	10.00	5.29	9.00	4.26	6.50	4.64	15.50	4.42
DON'T KNOW																		
INCORRECT RESPONSE																		
NO RESPONSE	12.00	12.50	15.00	13.04	4.00	6.06	6.00	8.11	16.00	9.88	21.00	11.11	27.00	12.80	10.00	7.14	37.00	10.54
OTHER RESPONSES AND OTHER SUBJECTS	8.00	8.33	3.00	2.61	2.00	3.03	2.00	2.70	10.00	6.17	5.00	2.64	11.00	5.21	4.00	2.86	15.00	4.27
TOTAL RESPONSES	96.00	99.99	114.99	99.98	66.00	99.99	73.99	99.97	62.00	100.00	188.98	99.98	210.99	99.98	139.99	99.99	350.98	99.99

*HOME ECONOMICS AND SHOP ARE TOTALLED FOR COMPARATIVE PURPOSES.

TABLE XL

TABULATION OF DATA FOR QUESTION 11D, "WHAT SUBJECT DO YOU LIKE BEST?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ENGLISH	17.83	18.57	2.83	2.46	12.58	19.06	2.33	3.15	30.41	18.77	5.16	2.73	20.66	9.79	14.91	10.65	35.57	10.13
HISTORY	0	0	1.00	.87	1.50	2.27	1.50	2.03	1.50	.93	2.50	1.32	1.00	.47	3.00	2.14	4.00	1.14
HOME ECONOMICS	7.00	7.29	—	—	6.00	9.09	—	—	13.00	8.02	—	—	20.50*	9.72*	10.70*	7.64*	31.20*	8.89*
MATHEMATICS	19.00	19.79	22.33	19.42	10.75	16.29	23.37	31.58	29.75	18.36	45.70	24.18	41.33	19.59	34.12	24.37	75.45	21.50*
MUSIC	1.50	1.56	.50	.43	.25	.38	.83	1.12	1.75	1.08	1.33	.70	2.00	.95	1.08	.77	3.08	.88
PHYSICAL ED.	2.00	2.08	13.00	11.30	5.00	7.58	7.87	10.63	7.00	4.32	20.87	11.04	15.00	7.11	12.87	9.19	27.87	7.94
SCIENCE	20.33	21.18	38.67	33.63	9.83	14.89	20.37	27.53	30.16	18.62	59.04	31.24	59.00	27.96	30.20	21.57	89.20	25.41
SHOP	—	—	13.50	11.74	—	—	4.70	6.35	—	—	18.20	9.63	—	—	—	—	—	—
SOCIAL STUDIES	10.83	11.28	12.83	11.16	12.33	18.68	8.70	11.76	23.16	14.30	21.53	11.39	23.66	11.21	21.03	15.02	44.69	12.73
SPELLING	11.50	11.98	3.33	2.90	3.75	5.68	2.33	3.15	15.25	9.41	5.66	2.99	14.83	7.03	6.08	4.34	20.91	5.96
DON'T KNOW																		
INCORRECT RESPONSE																		
NO RESPONSE	4.00	4.17	7.00	6.09	3.00	4.54	1.00	1.35	7.00	4.32	8.00	4.23	11.00	5.21	4.00	2.86	15.00	4.27
OTHER RESPONSES AND OTHER SUBJECTS	2.00	2.08	0	0	1.00	1.51	1.00	1.35	3.00	1.85	1.00	.53	2.00	.95	2.00	1.43	4.00	1.14
TOTAL RESPONSES	95.99	99.98	114.99	100.00	65.99	99.97	74.00	100.00	161.98	99.98	188.99	99.98	210.98	99.99	139.99	99.98	350.97	99.99

*HOME ECONOMICS AND SHOP ARE TOTALLED
FOR COMPARATIVE PURPOSES.

TABLE XLI

TABULATION OF DATA FOR QUESTION 12b, "WHAT SUBJECT DO YOU LIKE LEAST?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ENGLISH	12.00	12.50	27.00	23.48	8.50	12.88	28.33	38.28	20.50	12.65	55.33	29.27	39.00	18.48	36.83	26.31	75.83	21.60
HISTORY	1.00	1.04	.50	.43	0	0	2.00	2.70	1.00	.62	2.50	1.32	1.50	.71	2.00	1.43	3.50	1.00
HOME ECONOMICS	1.00	1.04	—	—	3.00	4.54	—	—	4.00	2.47	—	—	2.00*	1.42*	4.00*	2.86*	6.00*	1.71*
MATHEMATICS	26.50	27.60	19.00	16.52	19.00	28.79	6.67	9.01	45.50	28.09	25.67	13.58	45.50	21.56	25.67	18.34	71.17	20.28
MUSIC	1.50	1.56	15.50	13.48	2.00	3.03	3.50	4.73	3.50	2.16	19.00	10.05	17.00	8.06	5.50	3.93	22.50	6.41
PHYSICAL ED.	1.50	1.56	1.00	.87	0	0	3.50	4.73	1.50	.93	4.50	2.38	2.50	1.18	3.50	2.50	6.00	1.71
SCIENCE	19.00	19.79	20.00	17.39	14.00	21.21	8.17	11.04	33.00	20.37	28.17	14.90	39.00	18.48	22.17	15.84	61.17	17.43
SHOP	—	—	1.00	.87	—	—	1.00	1.35	—	—	2.00	1.06	—	—	—	—	—	—
SOCIAL STUDIES	21.50	22.40	12.50	10.87	6.50	9.85	10.83	14.64	28.00	17.28	23.33	12.34	34.00	16.11	17.33	12.38	51.33	14.62
SPELLING	0	0	4.5	3.91	0	0	2.00	2.70	0	0	6.50	3.44	4.50	2.13	2.00	1.43	6.50	1.85
DON'T KNOW																		
INCORRECT RESPONSE																		
NO RESPONSE	8.00	8.33	11.00	9.56	10.00	15.15	6.00	8.11	18.00	11.11	17.00	8.99	19.00	8.48	16.00	11.43	35.00	9.97
OTHER RESPONSES AND OTHER SUBJECTS	4.00	4.17	3.00	2.61	3.00	4.54	2.00	2.70	7.00	4.32	5.00	2.64	7.00	3.32	5.00	3.57	12.00	3.42
TOTAL RESPONSES	96.00	99.99	115.00	99.99	66.00	99.99	74.00	99.99	162.00	100.00	189.00	99.97	211.00	99.93	140.00	100.02	351.00	100.00

*HOME ECONOMICS AND SHOP ARE TOTALLED FOR COMPARATIVE PURPOSES.

TABLE XLII

TABULATION OF DATA FOR QUESTION 13a, "DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	74	77.08	85	73.91	53	80.30	54	72.97	127	78.39	139	73.54	159	75.35	107	76.43	266	75.78
No	11	11.46	14	12.17	2	3.03	8	10.81	13	8.02	22	11.64	25	11.85	10	7.14	35	9.97
Mixed response, i.e., "Yes and No."	1	1.04	4	3.48	0	0	0	0	1	.62	4	2.12	5	2.37	0	0	5	1.42
Don't know	2	2.08	4	3.48	3	4.54	9	12.16	5	3.09	13	6.88	6	2.84	12	8.57	18	5.13
No response	8	8.33	8	6.96	8	12.12	3	4.05	16	9.88	11	5.82	16	7.58	11	7.86	27	7.69
Total responses	96	99.99	115	100.00	66	99.99	74	99.99	162	100.00	189	100.00	211	99.99	140	100.00	351	99.99

TABLE [illegible]III

TABULATION OF DATA FOR QUESTION 13b ("DO YOU THINK YOU ARE FITTED FOR THE KIND OF WORK YOU WANT TO DO?"), "IF YES, WHY?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
RESPONSES RELATING TO ABILITY:																		
I AM GOOD AT IT (CAPABLE, QUALIFIED, TALENTED, ETC.)	6	6.25	5	4.35	10	15.15	11	14.86	16	9.88	16	8.47	11	5.21	21	15.00	32	9.12
I AM INTELLIGENT (BRIGHT, SMART, ETC.)	1	1.04	2	1.74	2	3.03	5	6.76	3	1.85	7	3.70	3	1.42	7	5.00	10	2.85
I AM STRONG	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
I AM TALL	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
I CAN COOK WELL	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
I CAN TYPE	2	2.08	0	0	1	1.51	0	0	3	1.85	0	0	2	.95	1	.71	3	.85
I CATCH ON FAST	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
I GET GOOD GRADES	3	3.12	2	1.74	4	6.06	3	4.05	7	4.32	5	2.64	5	2.37	7	5.00	12	3.42
I HAVE A GOOD VOICE	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
I HAVE GOOD HANDWRITING	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
I HAVE IMAGINATION	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
I KNOW COLORS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
I KNOW FRENCH	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
I UNDERSTAND PEOPLE	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
RESPONSES RELATING TO ATTITUDE:																		
I AM AMBITIOUS	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
I AM INTERESTED IN IT	5	5.21	2	1.74	4	6.06	3	4.05	9	5.56	5	2.64	7	3.32	7	5.00	14	3.99
I ENJOY IT, LIKE IT	6	6.25	3	2.61	9	13.64	6	8.11	15	9.26	9	4.76	9	4.26	15	10.71	24	6.84
I HAVE A HUNCH THAT I CAN DO IT	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
I HAVE CONFIDENCE	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
I LIKE CHILDREN	2	2.08	0	0	4	6.06	0	0	6	3.70	0	0	2	.95	4	2.86	6	1.71
I STUDY HARD	2	2.08	0	0	1	1.51	1	1.35	3	1.85	1	.53	2	.95	2	1.43	4	1.14
I WANT TO DO THAT KIND OF WORK	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
I WANT TO HELP OTHERS	3	3.12	0	0	3	4.54	1	1.35	6	3.70	1	.53	3	1.42	4	2.86	7	1.99
I WILL BE WILLING TO WORK	0	0	1	.87	1	1.51	0	0	1	.62	1	.53	1	.47	1	.71	2	.57

TABLE XLIII (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
RESPONSES RELATING TO EDUCATION AND EXPERIENCE:																		
I AM GETTING EDUCATED FOR IT	1	1.04	0	0	1	1.51	1	1.35	2	1.23	1	.53	1	.47	2	1.43	3	.85
I HAVE EXPERIENCE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
I KNOW ABOUT IT	0	0	2	1.74	0	0	5	6.76	0	0	7	3.70	2	.95	5	3.57	7	1.99
MY FATHER IS IN THE FIELD	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
MY FATHER IS TEACHING ME	0	0	1	.87	0	0	3	4.05	0	0	4	2.12	1	.47	3	2.14	4	1.14
DON'T KNOW	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
INCORRECT RESPONSE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
NO RESPONSE	60	62.50	87	75.65	17	25.76	24	32.43	77	47.53	111	58.73	147	69.67	41	29.29	188	53.56
TOTAL RESPONSES	96	99.97	115	100.01	66	99.95	74	99.97	162	99.98	189	100.01	211	99.95	140	99.98	351	99.94

TABLE XLIV

TABULATION OF DATA FOR QUESTION 14, "HAVE YOU ALREADY DONE OR HELPED ANYONE DO THIS KIND OF WORK?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
YES	24	25.00	7	6.09	20	30.30	14	18.92	44	27.16	21	11.11	31	14.69	34	24.29	65	18.52
NO	37	38.54	20	17.39	21	31.82	26	35.13	58	35.80	46	24.34	57	27.01	47	33.57	104	29.63
NO RESPONSE	35	36.46	88	76.52	25	37.88	34	45.95	60	37.04	122	64.55	123	58.29	59	42.14	182	51.85
TOTAL RESPONSES	96	100.00	115	100.00	66	100.00	74	100.00	162	100.00	189	100.00	211	99.99	140	100.00	351	100.00

TABLE LV

TABULATION OF DATA FOR QUESTION #5a, "WHAT JOBS HAVE YOU HAD?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
BABYSITTER	21	21.87	4	3.48	18	27.27	9	12.16	39	24.07	13	6.88	25	11.85	27	19.38	52	14.81
CADDY	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
CAMP COUNSELOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
																	1	.28
CAR WASHER	0	0	1	.87	0	0	4	5.40	0	0	5	2.64	1	.47	4	2.86	5	1.42
FLOOR WASHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
HELPER, BROWNIES	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
HOSPITAL HELPER	0	0	0	0	3	4.54	1	1.35	3	1.85	1	.53	0	0	4	2.86	4	1.14
LIFE GUARD	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MOW LAWNS	0	0	8	6.96	0	0	11	14.86	0	0	19	10.05	8	3.79	11	7.86	19	5.41
PINBOY	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
RAKE LEAVES	1	1.04	3	2.61	0	0	2	2.70	1	.62	5	2.64	4	1.90	2	1.43	6	1.71
SHOESHINE BOY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SHOVEL SNOW	0	0	2	1.74	0	0	3	4.05	0	0	5	2.64	2	.95	3	2.14	5	1.42
SWEEPER	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
WAITRESS	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
GROUP II:																		
BUSINESS CONTACT																		
[illegible] SALESMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GAS SALESMAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
MAGAZINE SALESMAN	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
NEWSPAPER BOY	0	0	14	12.17	0	0	19	25.68	0	0	33	17.46	14	6.63	19	13.57	33	9.40
SALESCLERK IN A																		
CAMERA SHOP	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
CLOTHING STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
RECORD STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP III: ORGANIZATION																		
CLERK	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
CLERK, FATHER'S OFFICE	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
CLERK, FATHER'S STORE	0	0	1	.87	0	0	3	4.05	0	0	4	2.12	1	.47	3	2.14	4	1.14
SECRETARY	2	2.08	1	.87	1	1.51	0	0	3	1.85	1	.53	3	1.42	1	.71	4	1.14
STOCKBOY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28

TABLE XLV (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP IV: TECHNOLOGY																		
DELIVERY BOY	0	0	2	1.74	0	0	4	2.70	0	0	6	3.17	2	.95	4	2.86	6	1.71
DRY-CLEANER HAND	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
SHOP WORKER	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
TELEPHONE OPERATOR	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
TYPESETTER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
WORKER IN A GAS STATION	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
WORKER IN A NEWSPAPER PLANT	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
GROUP V: OUTDOOR																		
DOG WALKER	0	0	1	.87	1	1.51	1	1.35	1	.62	2	1.06	1	.47	2	1.43	3	.85
FARM WORKER	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
GARDEN WORKER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
LANDSCAPE WORKER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
RANCH WORKER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP VI: SCIENCE																		
SCIENCE EXPERIMENT DEMONSTRATOR AT SCIENCE FAIR	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP VII: GENERAL CULTURAL																		
TEACHER'S HELPER	2	2.08	0	0	2	3.03	0	0	4	2.47	0	0	2	.95	2	1.43	4	1.14

TABLE XLV (CONTINUED)

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
GROUP VIII: ARTS & ENTERTAINMENT																		
ART INSTRUCTOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
DANCER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DANCING INSTRUCTOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
MODEL	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
MUSIC INSTRUCTOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SINGER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SWIMMING INSTRUCTOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
NO RESPONSE	64	66.67	68	59.13	39	59.09	20	27.03	103	63.58	88	40.56	132	62.56	59	42.14	191	54.42
TOTAL RESPONSES	98	102.08	120	104.35	71	107.52	102	135.08	169	104.34	222	117.48	218	103.27	173	123.45	391	113.68

TABLE VI

TABULATION OF DATA FOR QUESTION 15a, "WHICH JOB DID YOU LIKE BEST?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
BABYSITTER	12	12.50	2	1.74	5	7.58	1	1.35	17	10.49	3	1.59	14	6.63	6	4.29	20	5.70
CADDY	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CAMP COUNSELOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
CAR WASHER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
MOW LAWNS	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
PINBOY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
RAKE LEAVES	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SHOVEL SNOW	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
GROUP II: BUSINESS																		
CONTACT																		
DOORMAT SALESMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
EGG SALESMAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
NEWSPAPER BOY	0	0	6	5.22	0	0	4	5.40	0	0	10	5.29	6	2.84	4	2.86	10	2.85
SALESCLERK IN A RECORD STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP III: ORGANIZATION																		
CLERK, FATHER'S OFFICE	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
CLERK, FATHER'S STORE	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
SECRETARY	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
GROUP IV: TECHNOLOGY																		
DRY-CLEANER HAND	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SHOP WORKER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
TELEPHONE OPERATOR	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
TYPESETTER	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
WORKER IN A NEWSPAPER PLANT	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP V: OUTDOOR																		
FARM WORKER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
RANCH WORKER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28

TABLE XLVI (CONTINUED)

Response	7th Grade Girls No.	7th Grade Girls %	7th Grade Boys No.	7th Grade Boys %	8th Grade Girls No.	8th Grade Girls %	8th Grade Boys No.	8th Grade Boys %	Girls No.	Girls %	Boys No.	Boys %	7th Grade No.	7th Grade %	8th Grade No.	8th Grade %	Total Subjects No.	Total Subjects %
GROUP VI: SCIENCE (NONE)																		
GROUP VII: GENERAL CULTURAL (NONE)																		
GROUP VIII: ARTS & ENTERTAINMENT																		
ART INSTRUCTOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
DANCER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DANCING INSTRUCTOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SWIMMING INSTRUCTOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
NO RESPONSE	79	82.29	94	81.74	56	84.85	59	79.73	135	83.33	153	80.95	173	81.99	115	82.14	288	82.05
TOTAL RESPONSES	96	100.00	115	100.01	66	99.98	74	99.98	162	100.00	189	100.02	211	99.95	140	99.95	351	99.92

TABLE XL

TABULATION OF DATA FOR QUESTION 15c, "WHICH JOB DID YOU LIKE LEAST?"

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP I: SERVICE																		
BABYSITTER	1	1.04	1	.87	1	1.51	0	0	2	1.23	1	.53	2	.95	1	.71	3	.85
HELPER, GROCERIES	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
MOW LAWNS	0	0	3	2.61	0	0	2	2.70	0	0	5	2.64	3	1.42	2	1.43	5	1.42
RAKE LEAVES	1	1.04	1	.87	0	0	0	0	1	.62	1	.53	2	.95	0	0	2	.57
SHOESHINE BOY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SHOVEL SNOW	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP II:																		
BUSINESS CONTACT																		
NEWSPAPER BOY	0	0	2	1.74	0	0	3	4.05	0	0	5	2.64	2	.95	3	2.14	5	1.42
GROUP III: ORGANIZATION																		
CLERK, FATHER'S STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SECRETARY	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP IV: TECHNOLOGY																		
DRY-CLEANER HAND	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP V: OUTDOOR																		
DOG WALKER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
GROUP VI: SCIENCE (NONE)																		
GROUP VII:																		
GENERAL CULTURAL																		
TEACHER'S HELPER	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
GROUP VIII:																		
ARTS & ENTERTAINMENT																		
MODEL	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
NO RESPONSE	92	95.83	105	91.30	63	95.45	67	90.54	155	95.68	172	91.00	197	93.36	130	92.86	327	93.16
TOTAL RESPONSES	96	99.99	115	100.00	66	99.98	74	99.99	162	100.01	189	99.99	211	99.98	140	99.98	351	99.94

TABLE XLVIII

TABULATION OF RESPONSES FOR QUESTION 15a, "DO YOU HAVE A PART TIME JOB NOW?"

	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
Response	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Yes	8	8.33	10	8.70	8	12.12	12	16.22	16	9.88	22	11.64	18	8.53	20	14.29	38	10.83
No	44	45.83	54	46.96	27	40.91	26	35.13	71	43.83	80	42.33	98	46.44	53	37.86	151	43.02
No response	44	45.83	51	44.35	31	46.97	36	48.65	75	46.30	87	46.03	95	45.02	67	47.86	162	46.15
Total responses	96	99.99	115	100.01	66	100.00	74	100.00	162	100.01	189	100.00	211	99.99	140	100.01	351	100.00

TABLE XLIX

TABULATION OF DATA FOR QUESTION #5c ("DO YOU HAVE A PART TIME JOB NOW?"), "IF YES, WHAT IS IT?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
BABYSITTER	7	7.29	2	1.74	6	9.09	2	2.70	13	8.02	4	2.12	9	4.26	8	5.71	17	4.84
CADDY	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CAR WASHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MOW LAWNS	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP II: BUSINESS CONTACT																		
NEWSPAPER BOY	0	0	3	2.61	0	0	3	4.05	0	0	6	3.17	3	1.42	3	2.14	6	1.71
SALESCLERK, RECORD STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP III: ORGANIZATION																		
CLERK	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CLERK, FATHER'S OFFICE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CLERK, FATHER'S STORE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STOCKBOY	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP IV: TECHNOLOGY																		
JANITOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
WORKER, PEN SHOP	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP V: OUTDOOR (NONE)																		
GROUP VI: SCIENCE (NONE)																		
GROUP VII: GEN. CULTURAL (NONE)																		
GROUP VIII: ARTS & ENTERTAINMENT																		
MODEL	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
PIANO INSTRUCTOR	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
SWIMMING INSTRUCTOR	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
NO RESPONSE	88	91.67	105	91.30	58	87.88	64	86.49	146	90.12	169	89.42	193	91.47	122	87.14	315	89.74
TOTAL RESPONSES	96	100.00	115	100.00	66	99.99	74	100.04	162	100.00	189	100.01	211	99.97	140	99.96	351	99.93

TABLE L

TABULATION OF DATA FOR QUESTION 16a, "DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	36	37.50	41	35.65	32	48.48	26	35.13	68	41.97	67	35.45	77	36.49	58	41.43	135	38.46
NO	41	42.71	61	53.04	20	30.30	40	54.05	61	37.65	101	53.44	102	48.34	60	42.86	162	46.15
DON'T KNOW	6	6.25	5	4.35	9	13.64	4	5.40	15	9.26	9	4.76	11	5.21	13	9.28	24	6.84
NO RESPONSE	13	13.54	8	6.96	5	7.58	4	5.40	18	11.11	12	6.35	21	9.95	9	6.43	30	8.55
TOTAL RESPONSES	96	100.00	115	100.00	66	100.00	74	99.98	162	99.99	189	100.00	211	99.99	140	100.00	351	100.00

TABL[illegible]

TABULATION OF DATA FOR QUESTION 26b ("DO YOU PLAN TO GO TO A BUSINESS OR SPECIAL SCHOOL?"), "IF YES, NAME THE SCHOOL."

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
BUSINESS SCHOOLS																		
BUSINESS COLLEGE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SPECIAL SCHOOLS																		
AGRICULTURAL SCHOOL	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
AIR STEWARDESS SCHOOL	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
ART INSTITUTE	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
BEAUTICIAN SCHOOL	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
DRAMA SCHOOL	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
FORESTRY SCHOOL	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MODELLING SCHOOL	3	3.12	0	0	1	1.51	0	0	4	2.47	0	0	3	1.42	1	.71	4	1.14
MUSIC SCHOOL	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
OPTOMETRY SCHOOL	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
NURSING SCHOOL	2	2.08	0	0	4	6.06	0	0	6	3.70	0	0	2	.95	4	2.86	6	1.71
TEACHERS COLLEGE	3	3.12	1	.87	5	7.58	0	0	8	4.94	1	.53	4	1.90	5	3.57	9	2.56
TECHNOLOGICAL SCHOOL	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
JUNIOR COLLEGES																		
LOYOLA ACADEMY	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
WRIGHT JUNIOR COLLEGE	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
PROFESSIONAL SCHOOLS																		
LAW SCHOOL	0	0	5	4.35	0	0	2	2.70	0	0	7	3.70	5	2.37	2	1.43	7	1.99
MEDICAL SCHOOL	2	2.08	7	6.09	1	1.51	3	4.05	3	1.85	10	5.29	9	4.26	4	2.86	13	3.70
DON'T KNOW	2	2.08	1	.87	1	1.51	2	2.70	3	1.85	3	1.59	3	1.42	3	2.14	6	1.71
INCORRECT RESPONSE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
NO RESPONSE	78	81.35	95	82.61	52	78.79	63	85.13	130	80.25	158	83.60	173	81.99	115	82.14	288	82.05
TOTAL RESPONSES	96	100.07	115	100.01	66	99.98	74	99.98	162	100.00	189	100.01	211	99.97	140	99.97	351	99.95

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TABLE LII

TABULATION OF DATA FOR QUESTION 17A, "DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	87	90.62	105	91.30	61	92.42	70	94.59	148	91.36	175	92.59	192	90.99	131	93.57	323	92.02
NO	6	6.25	4	3.48	1	1.51	1	1.35	7	4.32	5	2.64	10	4.74	2	1.43	12	3.42
DON'T KNOW	1	1.04	3	2.61	3	4.54	2	2.70	4	2.47	5	2.64	4	1.90	5	3.57	9	2.56
NO RESPONSE	2	2.08	3	2.61	1	1.51	1	1.35	3	1.85	4	2.12	5	2.37	2	1.43	7	1.99
TOTAL RESPONSES	96	99.99	115	100.00	66	99.98	74	99.99	162	100.00	189	99.99	211	100.00	140	100.00	351	99.99

TABLE LIII

TABULATION OF DATA FOR QUESTION 17B ("DO YOUR PARENTS WANT YOU TO GO TO COLLEGE?"), "IF YES, WHICH COLLEGE?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
EASTERN COLLEGES																		
PRIVATE:																		
BRANDEIS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
HARVARD	0	0	2	1.74	0	0	2	2.70	0	0	4	2.12	2	.95	2	1.43	4	1.14
M.I.TECHNOLOGY	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
YALE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
WESLEYAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
STATE: (NONE)																		
OTHER:																		
ANNAPOLIS	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
WEST POINT	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
CENTRAL COLLEGES																		
PRIVATE:																		
JULIARD	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
JUNIATA	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LAWRENCE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NATIONAL TEACHERS	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NORTHWESTERN	12	12.50	9	7.83	8	12.12	10	13.51	20	12.35	19	10.05	21	9.95	18	12.86	39	11.11
NOTRE DAME	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
PURDUE	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
U. OF CHICAGO	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STATE:																		
ILLINOIS CENTRAL	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
IOWA STATE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
OHIO STATE	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
MICHIGAN STATE	0	0	1	.87	1	1.51	1	1.35	1	.62	2	1.06	1	.47	2	1.43	3	.85
NORTHERN ILLINOIS	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
U. OF MICHIGAN	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
U. OF ILLINOIS	10	10.42	13	11.30	5	7.58	6	8.11	15	9.26	19	10.05	23	10.90	11	7.86	34	9.69
U. OF WISCONSIN	0	0	5	4.35	0	0	0	0	0	0	5	2.64	5	2.37	0	0	5	1.42
WESTERN MICHIGAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28

TABLE LIII (CONTINUED)

Response	7th Grade Girls		7th Grade Boys		8th Grade Girls		8th Grade Boys		Girls		Boys		7th Grade		8th Grade		Total Subjects	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
SOUTHERN COLLEGES																		
Private:																		
Duke	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
Southern Methodist	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Miami of Florida	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
State: (none)																		
WESTERN COLLEGES																		
Private:																		
Texas A & M	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
State:																		
U. of Arizona	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
Other:																		
Air Force Academy	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
U.C.L.A.	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
Don't know	3	3.12	3	2.61	2	3.03	3	4.05	5	3.09	6	3.17	6	2.84	5	3.57	11	3.13
No response	63	65.62	72	62.61	48	72.73	39	52.70	111	68.52	111	58.73	135	63.98	87	62.14	222	63.25
Total responses	96	99.98	115	100.01	66	99.99	74	99.97	162	100.04	189	100.01	211	99.94	140	99.95	351	99.90

TABLE LIV

TABULATION OF DATA FOR QUESTION 17c, "DO YOU PLAN TO GO TO COLLEGE?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	80	83.33	108	93.91	57	86.36	64	86.49	137	84.57	172	91.01	188	89.10	121	86.43	309	88.03
NO	8	8.33	3	2.61	3	4.54	4	5.40	11	6.79	7	3.70	11	5.21	7	5.00	18	5.13
DON'T KNOW	5	5.21	2	1.74	1	1.51	2	2.70	6	3.70	4	2.12	7	3.32	3	2.14	10	2.85
NO RESPONSE	3	3.12	2	1.74	5	7.58	4	5.40	8	4.94	6	3.17	5	2.37	9	6.43	14	3.99
TOTAL RESPONSES	96	99.99	115	100.00	66	99.99	74	99.99	162	100.00	189	100.00	211	100.00	140	100.00	351	100.00

TABLE LV

TABULATION OF DATA FOR QUESTION 17b ("DO YOU PLAN TO GO TO COLLEGE?"), "IF YES, WHICH COLLEGE?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
EASTERN COLLEGES																		
PRIVATE:																		
BRANDEIS	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
COLUMBIA	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
HARVARD	0	0	2	1.74	0	0	1	1.35	0	0	3	1.59	2	.95	1	.71	3	.85
M.I.TECHNOLOGY	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
PRINCETON	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
WESLEYAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
STATE: (NONE)																		
OTHER:																		
ANNAPOLIS	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
WEST POINT	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
CENTRAL COLLEGES																		
PRIVATE:																		
JULIARD	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
JUNIATA	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LAWRENCE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
LOYOLA	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NATIONAL TEACHERS	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NORTHWESTERN	11	11.46	14	12.17	7	10.61	11	14.86	18	11.11	25	13.23	25	11.85	18	12.86	43	12.25
NOTRE DAME	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
PURDUE	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
U. OF CHICAGO	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
STATE:																		
ILLINOIS CENTRAL	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
IOWA STATE	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
OHIO STATE	1	1.04	1	.87	1	1.51	1	1.35	2	1.23	2	1.06	2	.95	2	1.43	4	1.14
MICHIGAN STATE	0	0	3	2.61	1	1.51	0	0	1	.62	3	1.59	3	1.42	1	.71	4	1.14
NORTHERN ILLINOIS	0	0	2	1.74	1	1.51	0	0	1	.62	2	1.06	2	.95	1	.71	3	.85
U. OF MICHIGAN	1	1.04	0	0	0	0	1	1.35	1	.62	1	.53	1	.47	1	.71	2	.57
U. OF ILLINOIS	11	11.46	14	12.17	6	9.09	11	14.86	17	10.49	25	13.23	25	11.85	17	12.14	42	11.97
U. OF WISCONSIN	1	1.04	3	2.61	1	1.51	2	2.70	2	1.23	5	2.64	4	1.90	3	2.14	7	1.99
WESTERN MICHIGAN	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28

TABLE LV (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
SOUTHERN COLLEGES																		
PRIVATE:																		
DUKE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SOUTHERN METHODIST	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MIAMI OF FLORIDA	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
STATE:																		
U. OF NORTH CAROLINA	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
WESTERN COLLEGES																		
PRIVATE:																		
TEXAS A & M:	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
STATE:																		
U. OF ARIZONA	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
U. OF SOUTHERN CALIF.	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
OTHER:																		
AIRFORCE ACADEMY	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
U.C.L.A	2	2.08	0	0	0	0	0	0	2	1.23	0	0	2	.95	0	0	2	.57
DON'T KNOW	5	5.21	5	4.35	3	4.54	2	2.70	8	4.94	7	3.70	10	4.74	5	3.57	15	4.27
NO RESPONSE	55	57.29	60	52.17	44	66.67	38	51.35	99	61.73	98	51.32	115	54.50	82	58.57	197	56.12
TOTAL RESPONSES	96	99.98	115	100.00	66	99.97	74	99.97	162	100.01	189	100.02	211	99.96	140	99.94	351	99.87

TAB LVI

TABULATION OF DATA FOR QUESTION 17c ("DO YOU PLAN TO GO TO COLLEGE? IF YES, WHICH COLLEGE?"), "WHY?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
ACADEMIC REASONS																		
I WANT TO BE SMART	0	0	1	.87	0	0	2	2.70	0	0	3	1.59	1	.47	2	1.43	3	.85
IT HAS COURSES I WANT TO TAKE	2	2.08	2	1.74	7	10.61	7	9.46	9	5.56	9	4.76	4	1.90	14	10.00	18	5.13
IT IS A GOOD SCHOOL	2	2.08	1	.87	7	10.61	7	9.46	9	5.56	8	4.23	3	1.42	14	10.00	17	4.84
ATHLETIC REASONS																		
IT HAS A GOOD TEAM	0	0	6	5.22	0	0	5	6.76	0	0	11	5.82	6	2.84	5	3.57	11	3.13
ECONOMIC REASONS																		
EXPENSES ARE LOW	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
I CAN GET A PART-TIME JOB THERE	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
I CAN HAVE A PART-TIME MAID	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
FAMILY REASONS																		
A RELATIVE GOES THERE	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
I HAVE RELATIVES THERE	2	2.08	0	0	1	1.51	0	0	3	1.85	0	0	2	.95	1	.71	3	.85
MY FATHER WENT THERE	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
MY PARENTS SAY I HAVE TO GO THERE	0	0	1	.87	0	0	0	0	0	0	1	.47	1	.47	0	0	1	.28
TO PLEASE MY PARENTS	1	1.04	1	.87	3	4.54	0	0	4	2.47	1	.53	2	.95	3	2.14	5	1.42
GEOGRAPHICAL REASONS																		
I LIKE THAT PART OF THE COUNTRY	1	1.04	0	0	0	0	2	2.70	1	.62	2	1.06	1	.47	2	1.43	3	.85
IT IS FAR FROM HOME	0	0	0	0	2	3.03	1	1.35	2	1.23	1	.53	0	0	3	2.14	3	.85
IT IS NEAR HOME	1	1.04	2	1.74	3	4.54	2	2.70	4	2.47	4	2.12	3	1.42	5	3.57	8	2.28
PERSONAL REASONS																		
I LIKE THE UNIVERSITY	2	2.08	2	1.74	8	12.12	6	8.11	10	6.17	8	4.23	4	1.90	14	10.00	18	5.13
I WANT TO MEET A BOY	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DON'T KNOW	9	9.39	10	8.70	12	18.18	20	27.03	21	12.96	30	15.87	19	9.00	32	22.86	51	14.53
INCORRECT RESPONSE	3	3.12	2	1.74	2	3.03	3	4.05	5	3.09	5	2.64	5	2.37	5	3.57	10	2.85
NO RESPONSE	73	76.04	86	74.78	18	27.27	16	21.62	91	56.17	102	53.97	159	75.35	34	24.29	193	54.99
TOTAL RESPONSE	96	99.99	115	100.01	66	99.97	74	99.99	162	100.01	189	100.00	211	99.98	140	99.97	351	99.95

TABLE LVII

TABULATION OF DATA FOR QUESTION 17F, "DO YOU PLAN TO WORK TO EARN MONEY WHILE YOU ARE IN COLLEGE?"

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
YES	55	57.29	84	73.04	34	51.51	50	67.57	89	54.94	134	70.90	139	65.88	84	60.00	223	63.53
NO	27	28.12	27	23.48	16	24.24	14	18.92	43	26.54	41	21.69	54	25.59	30	21.43	84	23.93
DON'T KNOW	0	0	2	1.74	10	15.15	6	8.11	10	6.17	8	4.23	2	.95	16	11.43	18	5.13
NO RESPONSE	14	14.58	2	1.74	6	9.09	4	5.40	20	12.35	6	3.17	16	7.58	10	7.14	26	7.41
TOTAL RESPONSES	96	99.99	115	100.00	66	99.99	74	100.00	162	100.00	189	99.99	211	100.00	140	100.00	351	100.00

TABLE LVIII

TABULATION OF DATA FOR QUESTION 17a ("DO YOU PLAN TO WORK TO EARN MONEY WHILE YOU ARE IN COLLEGE?"), "AT WHAT KIND OF WORK?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
GROUP I: SERVICE																		
BEAUTICIAN	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
DOING ODD JOBS	0	0	3	2.61	0	0	2	2.70	0	0	5	2.64	3	1.42	2	1.43	5	1.42
WAITRESS	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
GROUP II: BUSINESS CONTACT																		
DIME STORE SALESCLERK	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
DEPARTMENT STORE SALESCLERK	0	0	0	0	6	9.09	0	0	6	3.70	0	0	0	0	6	4.29	6	1.71
SALESMAN, SALESWOMAN	0	0	3	2.61	2	3.03	1	1.35	2	1.23	4	2.12	3	1.42	3	2.14	6	1.71
GROUP III: ORGANIZATION																		
CLERK, DRUG STORE	1	1.04	4	3.48	1	1.51	1	1.35	2	1.23	5	2.64	5	2.37	2	1.43	7	1.99
CLERK, POST OFFICE	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
OFFICE WORKER, SECRETARY	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
MY OWN BUSINESS	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
SALES MANAGER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
STOCK BOY	0	0	3	2.61	0	0	3	4.05	0	0	6	3.17	3	1.42	3	2.14	6	1.71
STOCK CLERK	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
GROUP IV: TECHNOLOGY																		
AVIATOR	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
DELIVERYMAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ELECTRICIAN	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
MECHANIC	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
WORKER, GAS STATION	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
WORKER, NEWSPAPER PLANT	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
GROUP V: OUTDOOR																		
SKIN DIVER	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28

TABLE LVIII (CONTINUED)

RESPONSE	7TH GRADE GIRLS No.	7TH GRADE GIRLS %	7TH GRADE BOYS No.	7TH GRADE BOYS %	8TH GRADE GIRLS No.	8TH GRADE GIRLS %	8TH GRADE BOYS No.	8TH GRADE BOYS %	GIRLS No.	GIRLS %	BOYS No.	BOYS %	7TH GRADE No.	7TH GRADE %	8TH GRADE No.	8TH GRADE %	TOTAL SUBJECTS No.	TOTAL SUBJECTS %
GROUP VI: SCIENCE																		
HOSPITAL ATTENDENT	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	0	.28
NURSE	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
SCIENTIST	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
GROUP VII: GENERAL CULTURAL																		
LIBRARIAN	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
NEWSPAPER REPORTER	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
GROUP VIII: ARTS & ENTERTAINMENT																		
ARTIST	0	0	0	0	1	1.51	1	1.35	1	.62	1	.53	0	0	2	1.43	2	.57
AUTHOR	0	0	1	.87	1	1.51	1	1.35	1	.62	2	1.06	1	.47	2	1.43	3	.85
DANCER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
MODEL	1	1.04	0	0	1	1.51	0	0	2	1.23	0	0	1	.47	1	.71	2	.57
NIGHTCLUB ENTERTAINER	0	0	0	0	1	1.51	0	0	1	.62	0	0	0	0	1	.71	1	.28
SINGER	0	0	0	0	3	4.54	0	0	3	1.85	0	0	0	0	3	2.14	3	.85
ANYTHING THAT PAYS	1	1.04	7	6.09	1	1.51	5	6.76	2	1.23	12	6.35	8	3.79	6	4.29	14	3.99
PART TIME JOB	1	1.04	12	10.43	2	3.03	8	10.81	3	1.85	20	10.58	13	6.16	10	7.14	23	6.55
DON'T KNOW	2	2.08	4	3.48	8	12.12	4	5.40	10	6.17	8	4.23	6	2.84	12	8.57	18	5.13
INCORRECT RESPONSE	0	0	4	3.48	0	0	0	0	0	0	4	2.12	4	1.90	0	0	4	1.14
NO RESPONSE	87	90.62	63	54.78	30	45.45	41	55.40	117	72.22	104	55.03	150	71.09	71	50.71	221	62.96
TOTAL RESPONSE	96	99.98	115	100.01	66	99.94	74	99.97	162	99.98	189	100.01	211	99.93	140	99.97	351	99.89

TABLE LIX

TABULATION OF DATA FOR QUESTION 18, "IF YOU DO NOT INTEND TO GO TO A SPECIAL SCHOOL OR A COLLEGE, HOW DO YOU PLAN TO PREPARE YOURSELF FOR THE WORK YOU WANT TO DO?"

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
PART-TIME EDUCATION																		
TAKE PART-TIME CLASSES	0	0	1	.87	0	0	0	0	0	0	1	.53	1	.47	0	0	1	.28
TAKE SPECIAL LESSONS	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
LATER EDUCATION																		
GO TO COLLEGE LATER	0	0	0	0	2	3.03	0	0	2	1.23	0	0	0	0	2	1.43	2	.57
NO ADDITIONAL EDUCATION																		
I DON'T NEED COLLEGE	0	0	1	.87	0	0	1	1.35	0	0	2	1.06	1	.47	1	.71	2	.57
JUST START WORKING	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
ON-THE-JOB TRAINING	0	0	0	0	0	0	2	2.70	0	0	2	1.06	0	0	2	1.43	2	.57
WORK HARD	0	0	2	1.74	0	0	0	0	0	0	2	1.06	2	.95	0	0	2	.57
WORK WITH MY FATHER	0	0	0	0	0	0	1	1.35	0	0	1	.53	0	0	1	.71	1	.28
SELF-EDUCATION																		
GO TO LECTURES	1	1.04	0	0	0	0	0	0	1	.62	0	0	1	.47	0	0	1	.28
READ BOOKS	1	1.04	0	0	2	3.03	0	0	3	1.85	0	0	1	.47	2	1.43	3	.85
STUDY ON MY OWN	1	1.04	2	1.74	0	0	0	0	1	.62	2	1.06	3	1.42	0	0	3	.85
DON'T KNOW	2	2.08	1	.87	2	3.03	1	1.35	4	2.47	2	1.06	3	1.42	3	2.14	6	1.71
NO RESPONSE	91	94.79	108	93.91	58	87.88	68	91.89	149	91.97	176	93.12	190	94.31	126	90.00	325	92.59
TOTAL RESPONSES	96	99.99	115	100.00	66	100.00	74	99.99	162	99.99	189	100.01	211	99.98	140	99.99	351	99.97

TAB LX

TABULATION OF DATA FOR QUESTION 19, "WHAT SUBJECTS ARE YOU TAKING? INCLUDE ALL SUBJECTS OR ACTIVITIES."

RESPONSE	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
SUBJECTS																		
ENGLISH	60	62.50	44	38.26	42	63.64	37	50.00	102	62.96	81	42.86	104	49.29	79	56.43	183	52.14
HEALTH	9	9.37	8	6.96	7	10.61	11	14.86	16	9.88	19	10.05	17	8.06	18	12.86	35	9.97
HISTORY	14	14.58	14	12.17	13	19.70	16	21.62	27	16.67	30	15.87	28	13.27	29	20.71	57	16.24
HOME ECONOMICS	42	43.75	0	0	34	51.51	0	0	76	46.91	0	0	42	19.90	34	24.36	76	21.65
GEOGRAPHY	6	6.25	6	5.22	3	4.54	6	8.11	9	5.56	12	6.35	12	5.69	9	6.43	21	5.98
LANGUAGES	3	3.12	3	2.61	5	7.58	6	8.11	8	4.94	9	4.76	6	2.84	11	7.86	17	4.84
FRENCH																		
GERMAN																		
LATIN																		
SPANISH																		
MATHEMATICS	63	65.62	43	37.39	39	59.10	35	47.30	102	62.96	78	41.27	106	50.24	74	52.86	180	51.28
SCIENCE	59	61.46	44	38.26	40	60.61	34	45.95	99	61.11	78	41.27	103	48.81	74	52.86	177	50.43
SHOP	0	0	30	26.09	0	0	34	45.95	0	0	64	33.86	30	14.22	34	24.29	64	18.23
SHORTHAND	3	3.12	0	0	3	4.54	0	0	6	3.70	0	0	3	1.42	3	2.14	6	1.71
SOCIAL STUDIES	62	64.58	34	29.56	43	65.15	32	43.24	105	64.81	66	34.92	96	45.50	75	53.57	171	48.72
SPELLING	24	25.00	15	13.04	25	37.88	23	31.08	49	30.25	38	20.11	39	18.48	48	34.29	87	24.79
TYPING	5	5.21	0	0	4	6.06	0	0	9	5.56	0	0	5	2.37	4	2.86	9	2.56
ACTIVITIES																		
BAND	22	22.92	14	12.17	12	18.18	15	20.27	34	20.99	29	15.34	36	17.06	27	19.29	63	17.95
CHOIR	13	13.54	4	3.48	10	15.15	2	2.70	23	14.20	6	3.17	17	8.06	12	8.57	29	8.26
LIBRARY PERIOD	33	34.37	30	26.09	19	28.79	15	20.27	52	32.10	45	23.81	63	29.86	34	24.29	97	27.63
MUSIC	35	36.46	32	27.83	23	34.85	22	29.73	58	35.80	54	28.57	67	31.75	45	32.14	112	31.91
PHYSICAL EDUCATION	42	43.75	35	30.43	37	56.06	33	44.59	79	48.76	68	35.98	77	36.49	70	50.00	147	41.88
STUDY HALL	18	18.75	10	8.70	20	30.30	9	12.16	38	23.46	19	10.05	28	13.27	29	20.71	57	16.24

TABLE LX (CONTINUED)

	7TH GRADE GIRLS		7TH GRADE BOYS		8TH GRADE GIRLS		8TH GRADE BOYS		GIRLS		BOYS		7TH GRADE		8TH GRADE		TOTAL SUBJECTS	
RESPONSE	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
OTHER SUBJECTS AND ACTIVITIES	10	10.43	6	5.22	11	16.67	8	10.81	21	12.96	14	7.41	16	7.58	19	13.57	35	9.97
ALGEBRA																		
BUSINESS TRAINING																		
CHEMISTRY																		
DRAMATICS																		
GEOMETRY																		
ENGINEERING																		
MECHANICS																		
PENMANSHIP																		
NURSES' TRAINING																		
REMEDIAL READING																		
SWIMMING																		
TOTAL NUMBER OF CORRECT RESPONSES	523	6.25	372	2.61	390	9.00	338	6.76	913	7.41	710	4.23	895	4.26	728	7.86	1623	5.70
INCORRECT RESPONSE*	6	34.37	3	61.74	6	34.85	5	50.00	12	34.57	8	57.14	9	49.29	11	42.86	20	46.72
NO RESPONSE	35	—	71	—	23	—	37	—	56	—	108	—	104	—	60	—	164	—
STUDENTS RESPONDING (CORRECTLY)	63	65.62	44	38.26	43	65.15	37	50.00	106	65.43	81	42.86	107	50.71	80	57.14	187	53.28
AVERAGE NUMBER OF SUBJECTS AND ACTIVITIES MENTIONED PER STUDENT	8.30	99.99	8.45	100.00	9.29	100.00	9.13	100.00	8.69	100.00	8.64	100.00	8.36	100.00	9.21	100.00	8.73	100.00

*PERCENTAGES NOT LISTED FOR COMPUTATIONAL REASONS. (SEE SUMS.)

APPENDIX B

Analysis of Sample

Table lxi contains a tabulation of the IEP test scores for the sample; mean scores and standard deviations are also listed. Table lxii presents the same information for the PMA scores.

For both the IEP and PMA, the girls' mean score is somewhat higher than the boys'. Table lxiii demonstrates the results of a comparison of these means. In neither case is the difference a statistically significant one.

An inspection of means for both sexes, however, indicates the uniqueness of the sample. The mean PMA scores are about one standard deviation above the national average. In addition, IEP means are much higher than the actual grade placement of the students.

The sample is unique in another respect; a majority of the students come from homes with a Jewish cultural and religious background.

The author decided to divide the sample into "Jewish" and "Gentile" groups to determine if there were any differences in the way the two groups would perform on the tests or respond to the questionnaire items.

A school official agreed that over half of the pupils studied were from Jewish homes but could not give a student-by-student report. The school records do not include church

Table lxi

TABULATION OF IOWA EVERY PUPIL TEST SCORES FOR SAMPLE

Grade Equi-valent	7th Grade Girls	7th Grade Boys	8th Grade Girls	8th Grade Boys	Girls	Boys	7th Grade	8th Grade	Total Subjects
5.5	0	1	0	0	0	1	1	0	1
5.6	0	0	0	0	0	0	0	0	0
5.7	0	0	0	0	0	0	0	0	0
5.8	0	0	0	0	0	0	0	0	0
5.9	0	0	0	0	0	0	0	0	0
6.0	0	0	0	0	0	0	0	0	0
6.1	1	1	0	0	1	1	2	0	2
6.2	0	0	0	0	0	0	0	0	0
6.3	0	0	0	0	0	0	0	0	0
6.4	0	1	0	1	0	2	1	1	2
6.5	0	0	0	0	0	0	0	0	0
6.6	1	1	0	0	1	1	2	0	2
6.7	1	0	0	0	1	0	1	0	1
6.8	0	1	0	0	0	1	1	0	1
6.9	2	3	0	0	2	3	0	0	5
7.0	1	8	1	0	2	8	9	1	10
7.1	1	5	0	0	1	5	6	0	6
7.2	0	3	1	2	1	5	3	3	6
7.3	0	2	0	0	0	2	2	0	2
7.4	4	1	2	2	6	3	5	4	9
7.5	5	2	2	1	7	3	7	3	10
7.6	5	1	2	3	7	4	6	5	11
7.7	2	4	0	1	2	5	6	1	7
7.8	2	1	3	2	5	3	3	5	8
7.9	3	1	1	0	4	1	4	1	5
8.0	4	1	1	4	5	5	5	5	10
8.1	4	3	2	2	6	7	9	4	13
8.2	2	5	4	1	5	5	7	5	10
8.3	6	4	1	1	7	5	10	2	12
8.4	5	6	3	2	8	8	11	5	16
8.5	4	10	1	2	5	12	14	3	17
8.6	5	7	3	4	8	11	12	7	19
8.7	3	0	2	2	5	2	3	4	7

TABLE 1x1 (CONTINUED)

Grade Equivalent	7th Grade Girls	7th Grade Boys	8th Grade Girls	8th Grade Boys	Girls	Boys	7th Grade	8th Grade	Total Subjects
8.8	1	3	1	0	2	3	4	1	5
8.9	4	4	7	4	11	8	8	11	19
9.0	4	6	3	2	7	8	10	5	15
9.1	6	1	4	4	10	5	7	8	15
9.2	1	4	1	3	2	7	5	4	9
9.3	1	3	0	1	1	4	4	1	5
9.4	2	5	2	5	4	10	7	7	14
9.5	4	4	3	1	7	5	8	4	12
9.6	0	3	2	2	2	5	3	4	7
9.7	0	1	0	2	0	3	1	2	3
9.8	0	1	0	3	0	4	1	3	4
9.9	3	1	3	1	6	2	4	4	8
10.0	1	0	0	5	1	5	1	5	6
10.1	1	1	1	1	2	2	2	2	4
10.2	2	1	2	2	4	3	3	4	7
10.3	1	0	1	0	2	0	1	1	2
10.4	2	1	3	1	5	2	3	4	7
10.5	2	0	2	0	4	0	2	2	4
10.6	0	0	0	2	0	2	0	2	2
10.7	0	0	0	1	0	1	0	1	1
10.8	0	0	0	0	0	0	0	0	0
10.9	0	0	1	1	1	1	0	2	2
11.0	0	0	1	1	1	1	0	2	2
11.1	0	0	0	1	0	1	0	1	1
11.2	0	0	0	1	0	1	0	1	1
11.3	0	0	0	0	0	0	0	0	0
11.4	0	0	0	0	0	0	0	0	0
Total	96	115	66	74	162	189	211	140	351
Mean*	8.49	8.35	8.90	9.02	8.75	8.72	8.42	8.97	8.74
Standard deviation*	.95	.99	.95	1.07	1.00	1.04	.98	1.00	1.01

*computed from grouped data

TABLE lxii

TABULATION OF PRIMARY MENTAL ABILITIES TEST SCORES FOR SAMPLE

IQ Scores	7th Grade Girls	7th Grade Boys	8th Grade Girls	8th Grade Boys	Girls	Boys	7th Grade	8th Grade	Total Subjects
79	0	1	0	0	0	1	1	0	1
80	0	0	0	0	0	0	0	0	0
81	1	0	0	0	1	0	1	0	1
82	0	0	0	0	0	0	0	0	0
83	0	0	0	0	0	0	0	0	0
84	0	0	0	0	0	0	0	0	0
85	0	0	0	2	0	2	0	2	2
86	0	0	0	0	0	0	0	0	0
87	0	1	0	0	0	1	1	0	1
88	0	0	0	0	0	0	0	0	0
89	0	1	2	0	2	1	1	2	3
90	3	5	1	0	4	5	8	1	9
91	0	1	0	1	0	2	1	1	2
92	0	1	1	2	0	3	1	2	3
93	1	0	1	1	2	1	1	2	3
94	0	0	0	1	0	1	0	1	1
95	1	3	0	0	1	3	4	0	4
96	0	3	0	1	0	4	3	1	4
97	0	4	1	1	1	5	4	2	6
98	1	0	0	1	1	1	1	1	2
99	1	6	1	0	2	6	7	1	8
100	3	2	2	0	5	2	5	2	7
101	2	3	0	1	2	4	5	1	6
102	3	2	1	1	4	3	5	2	7
103	2	2	7	1	9	3	4	8	12
104	2	3	3	0	5	3	5	3	8
105	1	3	2	3	3	6	4	5	9
106	6	2	1	3	7	5	8	4	12
107	1	4	1	1	2	5	5	2	7
108	5	3	3	2	8	5	8	5	13
109	4	2	0	4	4	6	6	4	10
110	4	2	1	3	5	5	6	4	10
111	3	1	4	2	7	3	4	6	10

TABLE lxii (CONTINUED)

IQ Scores	7th Grade Girls	7th Grade Boys	8th Grade Girls	8th Grade Boys	Girls	Boys	7th Grade	8th Grade	Total Subjects
112	2	3	0	2	2	5	5	2	7
113	2	5	1	1	3	6	7	2	9
114	2	3	1	3	3	6	5	4	9
115	1	1	1	3	2	4	2	4	6
116	3	1	1	1	4	2	4	2	6
117	2	3	2	0	4	3	5	2	7
118	2	5	3	5	5	10	7	8	15
119	3	5	1	1	4	6	8	2	10
120	4	4	2	3	6	7	8	5	13
121	0	2	0	4	0	6	2	4	6
122	2	1	1	2	3	3	3	3	6
123	5	6	1	0	6	6	11	1	12
124	0	1	0	1	0	2	1	1	2
125	0	2	1	4	1	6	2	5	7
126	1	2	2	1	3	3	3	3	6
127	1	0	5	0	6	0	1	5	6
128	3	2	2	1	5	3	5	3	8
129	0	1	2	1	2	2	1	3	4
130	1	3	0	2	1	5	4	2	6
131	0	1	1	0	1	1	1	1	2
132	1	0	1	0	2	0	1	1	2
133	1	0	0	1	1	1	1	1	2
134	1	0	0	0	1	0	1	0	1
135	0	1	1	1	1	2	1	2	3
136	0	2	1	0	1	2	2	1	3
137	1	1	0	1	1	2	2	1	3
138	0	0	1	0	1	0	0	1	1
139	3	0	1	1	4	1	3	2	5
140	3	0	1	1	4	1	3	2	5
141	3	2	0	0	3	2	5	0	5
142	1	1	0	0	1	1	2	0	2
143	0	0	0	0	0	0	0	0	0
144	0	1	0	0	0	1	1	0	1

TABLE 1xii (CONTINUED)

IQ Scores	7th Grade Girls	7th Grade Boys	8th Grade Girls	8th Grade Boys	Girls	Boys	7th Grade	8th Grade	Total Subjects
145	4	0	2	0	6	0	4	2	6
146	0	1	0	0	0	1	1	0	1
147	0	0	0	0	0	0	0	0	0
148	0	0	0	0	0	0	0	0	0
149	0	0	0	0	0	0	0	0	0
150	0	0	0	3	0	3	0	3	3
Total	96	115	66	74	162	189	211	140	351
Mean*	116.06	111.86	115.27	115.15	115.74	113.14	113.77	115.21	114.34
Standard deviation*	14.84	14.08	13.86	14.00	14.45	14.05	14.42	13.92	14.41

*computed from grouped data

TABLE lxiii

COMPARISON OF GIRLS' AND BOYS IEP AND PMA MEANS

Statistic	Girls	Boys
IEP Mean	8.75	8.72
Standard deviation	1.00	1.04
t	.263	
Confidence level	n.s.	
PMA Mean	115.74	113.14
Standard deviation	14.45	14.05
t	1.699	
Confidence level	n.s.	

membership and there was no way the school could provide the author with this data.

After consultation with a member of the author's doctoral committee, a substitute technique was utilized. Northwestern University Professor William M. McGovern was presented with the names of all the boys in the sample. (Dr. McGovern, a noted anthropologist and political scientist, is a recognized authority on ethnic groups and nationalities.)

Dr. McGovern proceeded to place the 189 names into five categories: "Probably Jewish," "Possibly Jewish," "Undetermined," "Possibly Gentile," and "Probably Gentile." This classification was made on the basis of the students' names; although not a foolproof method, it was the best available under the circumstances.

Results of this analysis follow.

"Probably Jewish"	81
"Possibly Jewish"	27
"Undetermined"	10
"Possibly Gentile"	20
"Probably Gentile"	51

Because of the school official's report that over half the sample were from Jewish homes, the author decided to use the first two and the last categories. Comparisons, therefore, were made between the 108 members of the "Probably Jewish" and "Possibly Jewish" categories and the 51 members of the "Probably Gentile" category.

The IEP and PMA means were compared. As Table lxiv

TABLE lxiv

COMPARISON OF IEP AND PMA SCORES FOR "JEWISH" BOYS AND "GENTILE" BOYS

Statistic	"Jewish" boys		"Gentile" Boys
IEP Mean	8.86		8.83
Standard deviation	1.00		1.04
t		.170	
Confidence level		n.s.	
PMA Mean	115.81		110.67
Standard deviation	14.84		14.08
t		2.097	
Confidence level		.05	

indicates, there is a significant difference between the PMA means but not between the IEP means.

The two groups' responses to Questions 2A, 4A, and 5A were classified according to the Roe system. Tables lxv, lxvi, and lxvii indicate the results.

Comparisons were made between the mean occupational levels of the two groups in regard to Questions 2A, 4A, and 5A. An inspection of the data reveals that the "Jewish" fathers' occupational preferences for their sons and the "Jewish" boys' own occupational preferences have a slightly higher mean level than do those of the "Gentile" fathers and students. This might be explained in terms of a frequent characteristic of minority groups--the desire to gain social acceptance through occupational status. When these differences are subjected to statistical analysis, as Table lxviii demonstrates, they are not found to be significant at the .01 or .05 confidence level.

Table lxviii also indicates that the mean level of the fathers' occupation is almost identical for the two groups. On this basis we might assume that both groups have similar socio-economic environments.

Another set of comparisons was made regarding the Roe occupational groups. Responses to Questions 2A, 4A, and 5A were subjected to chi square analysis (Group II, Business Contact, and Group III, Organization, were combined for Questions 2A and 4A to raise the chi square cells to five or

TABLE lxv

"JEWISH" BOYS' AND "GENTILE" BOYS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Classification		"Jewish" Boys	"Gentile" Boys
Group I:	Service	5.55%	1.96%
Group II:	Business Contact	2.78	1.96
Group III:	Organization	5.55	7.84
Group IV:	Technology	28.71	33.33
Group V:	Outdoor	1.85	3.92
Group VI:	Science	21.30	27.44
Group VII:	General Cultural	11.11	5.88
Group VIII:	Arts and Entertainment	10.19	9.80
Level 1		14.82	17.64
Level 2		43.52	49.01
Level 3		16.66	25.48
Level 4		10.18	0
Level 5; Level 6		1.86	0
No response		12.96	7.84

TABLE lxvi

"JEWISH" BOYS' AND "GENTILE" BOYS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Classification		"Jewish" Boys	"Gentile" Boys
Group I:	Service	1.86%	1.96%
Group II:	Business Contact	6.48	3.92
Group III:	Organization	12.04	5.88
Group IV:	Technology	6.49	9.80
Group V:	Outdoor	0	0
Group VI:	Science	12.04	15.69
Group VII:	General Cultural	4.63	1.96
Group VIII:	Arts and Entertainment	.93	3.92
Level 1		7.41	15.69
Level 2		16.67	11.76
Level 3		15.75	13.72
Level 4		3.71	1.96
Level 5; Level 6		.93	0
Freedom of choice		25.93	33.33
Don't know; incorrect response; no response		29.63	23.53

TABLE lxvii

"JEWISH" BOYS' AND "GENTILE" BOYS' RESPONSES CLASSIFIED AS TO GROUP AND LEVEL FOR QUESTION 5A, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

Classification		"Jewish" Boys	"Gentile" Boys
Group I:	Service	4.63%	7.84%
Group II:	Business Contact	27.78	15.69
Group III:	Organization	38.89	39.21
Group IV:	Technology	18.52	15.68
Group V:	Outdoor	0	0
Group VI:	Science	2.78	5.88
Group VII:	General Cultural	2.78	5.88
Group VIII:	Arts and Entertainment	.93	5.88
Level 1		5.56	3.92
Level 2		13.89	13.72
Level 3		59.27	62.74
Level 4		12.97	15.68
Level 5; Level 6		4.63	0
Incorrect response; no response		3.70	3.92

TABLE lxviii

COMPARISON OF MEAN OCCUPATIONAL LEVELS FOR "JEWISH" BOYS AND "GENTILE" BOYS IN RESPONSE TO QUESTIONS 2A ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"), AND 5A ("WHAT KIND OF WORK DOES YOUR FATHER DO?")

Statistic	"Jewish" Boys	"Gentile" Boys
Mean occupational level, Question 2A	2.33	2.08
Standard deviation	1.94	.69
t	1.111	
Confidence level	n.s.	
Mean occupational level, Question 4A	2.42	2.04
Standard deviation	.84	.95
t	1.310	
Confidence level	n.s.	
Mean occupational level, Question 5A	2.97	2.94
Standard deviation	1.38	.68
t	.231	
Confidence level	n.s.	

above; groups containing less than five responses were not used in this analysis.)

Tables lxix, lxx, and lxxi report the results. Question 4A came closest to producing significant statistics. "Jewish" fathers appeared to stress business contact and organizational occupations for their sons somewhat more than did "Gentile" fathers. This difference, however, is not significant at the .01 or .05 confidence level.

The final set of comparisons involved the similarity of responses to Questions 2A, 4A, and 5A. Results are reported in Table lxxii.

Although not statistically significant, the greatest difference appears when Questions 4A and 5A are compared. Fathers of the "Jewish" boys preferred their own occupation for their sons more frequently than did "Gentile" fathers. Additional investigations with larger samples and a more perceptive instrument might indicate whether this finding is valid. If so, this phenomenon may have its origins in the close unity and paternal dominance often noted in Jewish families.

In conclusion, the comparison of "Jewish" and "Gentile" boys indicates that the total findings of this study are not unduly biased by the large proportion of students from Jewish home backgrounds in the sample. Only one significant difference was found--that of the mean IQ score. Some tantalizing variances were noted in responses to questionnaire items but these did not prove to be significant when subjected to statistical analysis.

TABLE lxix

COMPARISON OF OCCUPATIONAL GROUPS FOR "JEWISH" BOYS AND "GENTILE" BOYS IN RESPONSE TO QUESTION 2A, "WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"

Classification		"Jewish" Boys	"Gentile" Boys
Group II: Group III:	Business Contact; Organization	8.33%	9.80%
Group IV:	Technology	28.71	33.33
Group VI:	Science	21.30	27.44
Group VIII:	Arts and Entertainment	10.19	9.80
χ^2		.250	
Confidence level		n.s.	

TABLE lxx

COMPARISON OF OCCUPATIONAL GROUPS FOR "JEWISH" BOYS AND "GENTILE" BOYS IN RESPONSE TO QUESTION 4A, "WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"

Classification		"Jewish" Boys	"Gentile" Boys
Group II: Group III:	Business Contact; Organization	18.52%	9.80%
Group IV:	Technology	6.49	9.80
Group VI:	Science	12.04	15.69
χ^2		2.623	
Confidence level		n.s.	

TABLE lxxi

COMPARISON OF OCCUPATIONAL GROUPS FOR "JEWISH" BOYS AND "GENTILE" BOYS IN RESPONSE TO QUESTION 5A, "WHAT KIND OF WORK DOES YOUR FATHER DO?"

Classification		"Jewish" Boys	"Gentile" Boys
Group II:	Business Contact	27.78%	15.69%
Group III:	Organization	38.89	39.21
Group IV:	Technology	18.52	15.68
χ^2		.957	
Confidence level		n.s.	

TABLE lxxii

COMPARISON OF "JEWISH" BOYS' AND "GENTILE" BOYS' RESPONSES TO QUESTIONS 2A ("WHAT KIND OF WORK DO YOU WANT TO DO WHEN YOU FINISH SCHOOL?"), 4A ("WHAT KIND OF WORK DOES YOUR FATHER WANT YOU TO DO?"), AND 5A ("WHAT KIND OF WORK DOES YOUR FATHER DO?")

Responses	"Jewish" Boys	"Gentile" Boys	χ^2	Confidence level
Responses to 2A and 4A the same	34.54%	48.00%	.805	n.s.
Responses to 2A and 5A the same	27.27	24.00	.339	n.s.
Responses to 4A and 5A the same	38.18	28.00	1.295	n.s.

APPENDIX C

The Vocational-Educational Questionnaire

INTEREST INVENTORY RECORD

Form I. Pupil Report of Interests and Activities
Part 4. Vocational and Educational Inventory

Name ______________________ Date of birth ______________ Age ______

Grade ______ School ______________________ Sex __________ Date __________

This is not an examination. Your answers will not be graded, but they will provide helpful information for teachers, librarians, and other pupils. Please answer each question carefully and as fully as you can. Your teacher will help if you need assistance.

1. If you are *not* in high school now, do you plan to go to high school? Yes ______ No ______

   If you are in high school now, do you plan to complete high school? Yes ______ No ______

2. What kind of work do you want to do when you finish school? ______________________

   Why? ______________________

   ____

   If you were not able to follow your first choice of work, what would be

   your second choice? ______________________

   your third choice? ______________________

3. When did you decide on the kind of work you want to do? ______________________

4. What kind of work does your father want you to do? ______________________

   Why? ______________________

   Your mother? ______________________

   Why? ______________________

5. What kind of work does your father do? ______________________

   Your mother? ______________________

6. Has a friend or relative influenced your choice of work? Yes ______ No ______

   If yes, how? ______________________

   ____

Designed by Paul A. Witty, Robert A. Sizemore, Ann Coomer, and Paul Kinsella for use in the Northwestern University—U.S. Office of Education Interest Survey.

INTEREST INVENTORY RECORD

Form I. Pupil Report of Interests and Activities
Part 4. Vocational and Educational Inventory

Name ________________ Date of birth ________________ Age ______

Grade ______ School ________________ Sex ______ Date ______

This is not an examination. Your answers will not be graded, but they will provide helpful information for teachers, librarians, and other pupils. Please answer each question carefully and as fully as you can. Your teacher will help if you need assistance.

1. If you are *not* in high school now, do you plan to go to high school? Yes ______ No ______

   If you are in high school now, do you plan to complete high school? Yes ______ No ______

2. What kind of work do you want to do when you finish school? ________________

   Why? ________________

   If you were not able to follow your first choice of work, what would be

   your second choice? ________________

   your third choice? ________________

3. When did you decide on the kind of work you want to do? ________________

4. What kind of work does your father want you to do? ________________

   Why? ________________

   Your mother? ________________

   Why? ________________

5. What kind of work does your father do? ________________

   Your mother? ________________

6. Has a friend or relative influenced your choice of work? Yes ______ No ______

   If yes, how? ________________

Designed by Paul A. Witty, Robert A. Sizemore, Ann Coomer, and Paul Kinsella for use in the Northwestern University—U.S. Office of Education Interest Survey.

7. Has anyone at school suggested a career for you? Yes ______ No ______

If yes, what career was suggested? ______

By whom? ______

8. Do you admire a famous person connected with the kind of work you want to do? Yes ______ No ______

If yes, who is this person? ______

9. Have you read any books or stories about the kind of work you want to do? Yes ______ No ______

If yes, name the books you have read: ______

______

10. Have the following influenced your choice of work?

(a) a character in a book: Yes ______ No ______

If yes, name the character: ______

(b) a magazine: Yes ______ No ______

If yes, name the magazine: ______

(c) a television or radio program: Yes ______ No ______

If yes, name the program: ______

(d) a movie: Yes ______ No ______

If yes, name the movie: ______

11. Do you like school? Yes ______ No ______

In what subject do you get your best marks? ______

Your poorest? ______

12. What subject do you like best? ______

Least? ______

If you are in grades 7 through 12, answer the following questions:

13. Do you think you are fitted for the kind of work you want to do? Yes ______ No ______

If yes, why? ______

14. Have you already done or helped anyone do this kind of work? Yes ______ No ______

15. What jobs have you had? ______________________________

____

Which job did you like best? ______________________________

Which job did you like least? ______________________________

Do you have a part time job now? Yes ______ No ______

If yes, what is it? ______________________________

16. Do you plan to go to a business or a special school? Yes ______ No ______

If yes, name the school: ______________________________

17. Do your parents want you to go to college? Yes ______ No ______

If yes, which college? ______________________________

Do you plan to go to college? Yes ______ No ______

If yes, which college? ______________________________

Why? ______________________________

Do you plan to work to earn money while you are in college? Yes ______ No ______

At what kind of work? ______________________________

18. If you do not intend to go to a special school or a college, how do you plan to prepare yourself for the work you want to do? ______________________________

____

____

19. What subjects are you taking? (Include all subjects or activities)

____

____

____

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